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ABSTRACT

The Food Stamp Program is the U.S. government's primary program to prevent the rural poor from going hungry. Food stamp allotments are set each year based on the cost of the "Thrifty Food Plan" (TFP), a minimally adequate diet defined by the U.S. Department of Agriculture (USDA), which sets costs by examining average food prices in urban supermarkets. This nationwide study examines rural markets to determine the actual cost and availability of TFP foods for persistently poor rural America. In 1989, a team of 2 surveyors traveled to 33 persistently poor rural U.S. counties, pricing 77 TFP foods in 133 food stores, including 51 supermarkets and 82 small to medium food stores. The study finds few competitively priced supermarkets located in rural areas, making the rural poor dependent upon limited, more expensive food sources. It also found unstocked shelves and a lack of nutritionally important foods. As a result of these conditions, the price of a rural TFP marketbasket exceeded food-stamp allotments. In 1989, the average cost for a week's worth of TFP groceries for a four-person household in poor rural America was 36% higher than USDA's 1989 maximum weekly food stamp benefit allotment of $75 for that household. The document recommends that food-stamp allotments be raised, that they be revised more often, and that the government re-evaluate the methodology used to establish food-stamp benefits. The document also recommends steps to support low-interest loans and cooperative wholesale buying for small and medium food stores in economically depressed rural areas. (TES)

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Shopping for Food in Rural America

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PUBLIC VOICE FOR FOOD AND HEALTH POLICY

HIGHER PRICES, FEWER CHOICES: Shopping for Food in Rural America

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We would also like to thank the steering committee for their guidance in the development and implementation of this study. Special thanks to Calvin Beale, Demographer at USDA's Economic Research Services, whose invaluable insights helped us define persistently poor rural counties in the United States. Thanks also go to Cathy Campbell, Assistant Professor of Nutrition at Cornell University, who, from the start, saw this project as a rural economic development study as well as a study on food stamps. To Kate Clancy, Assistant Professor of Nutrition and Food Management, whose historical and political perspectives greatly enhanced the study, many thanks. Thanks also go to Earl Johnson, who at the time of the study was a staff member on the House Select Committee on Hunger and to Kathy Porter, Director of Research at the Center on Budget and Policy Priorities.

Special thanks to Chuck Cowan, chief statistician at Opinion Research Corporation. Without his help developing the sampling strategy and drawing the sample, this project would have been extremely limited in scope.

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We would also like to thank USDA's Food Stamp Redemption office who expeditiously provided Public Voice with the endless reams of data on the food stores

in the 269 persistently poor rural counties in the United States. Special thanks to Suzanne Fecteau and Greg Evans.

Special thanks to all the stores who participated in the study. The attentiveness and interest of the store owners made the survey a success, as well as enjoyable.

And finally, warmest thanks to Mark Bellinger, Research Associate at Public Voice, who innocently accepted the challenge of going "on the road" for two months with his friend and fellow surveyor Henry Mullen to survey 133 food stores throughout the country. I only hope that with the exhausting task of conducting the pricing survey, came an unforgettable adventure of the extraordinary tastes, sites and sounds that the diversity of cultures in this country has to offer.

LEON E. PANETTA
18TH DISTRICT, CALIFORNIA

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I have spent many years working to ensure that our nation's nutrition programs meet the needs of those who require assistance. We have examined and reformed many different policy areas over the years including eligibility standards, access to information, adequate benefit levels and program administration, just to mention a few.

One of the most important things that we have discovered in our work is that the needs of recipients vary greatly depending on their age, family size, place of residence and other factors. One area where these differences are most striking is the differences between the urban poor and the rural poor. While the nation and the Congress tend to focus on the urban poor, Public Voice has been instrumental in providing information on the plight of the rural poor. This latest report, Higher Prices, Fewer Choices: Shopping for Food in Rural America, focuses on the startling inadequacy of food stamp benefits in persistently poor rural areas.

The Thrifty Food Plan is the basis on which food stamp benefit levels are calculated. The U.S. Department of Agriculture determines the cost of the Thrifty Food Plan each year and benefits are recalculated to reflect increased costs. However, as this report finds, the Thrifty Food Plan is not nearly adequate to allow households in persistently poor rural America to purchase the minimum diet outlined by USDA.

The Hunger Prevention Act enacted by Congress in 1988, which I authored, recognized the inadequacy of the Thrifty Food Plan to keep up with increasing food costs and attempted to improve it. However, Public Voice has determined that there continues to be a particularly significant problem in rural areas, where participants have less access to supermarkets. Higher prices and less selection result in an inadequate diet. It is precisely for this reason that I have introduced the Mickey Leland Memorial Domestic Hunger Relief Act to improve the benefits for all under the Thrifty Food Plan. Recognizing the unique difficulties facing people in rural areas, this report makes a strong case that this legislation is needed, and it will therefore help us to develop good nutrition policy for all Americans.

This report provides the concrete evidence that the current system does not meet the needs of the rural poor. It is up to us to change it.

LEON E. PANETTA
Member of Congress

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EXECUTIVE SUMMARY

Introduction

More than nine million people live in poverty in rural America. However, the rural poor are among the most invisible of Americans, even though the poverty rate in rural communities is higher than in metropolitan areas. In 1987, the poverty rate in rural America was 16.9 percent, as compared to 12.5 percent in metropolitan areas. Since 1978, poverty has increased by more than 25 percent, bringing the total number in poverty in rural America to 9.1 million.

The rural poor are a group profoundly hampered by poor nutrition and the debilitating health consequences that follow. Since 1984, Public Voice has documented the serious nutritional shortcomings in the diets of the rural poor and identified some of the causes of poor nutrition.

The Food Stamp Program is the government's primary program to prevent the rural poor from going hungry. However, there is growing evidence that benefit allotments are not adequate to actually purchase a minimally adequate diet.

Food stamp benefit allotments are set each year based on the cost of the "Thrifty Food Plan" (TFP) as defined by the U.S. Department of Agriculture (USDA). USDA sets these costs by examining average food prices in supermarkets solely in urban areas. There is no consideration of the prices faced by the rural poor who may not even have a supermarket nearby and who instead rely on smaller "mom and pop" stores which consistently have higher prices and fewer choices.

Public Voice undertook this nationwide study to examine the access to supermarkets in rural America and to determine the actual cost and availability of foods in a TFP marketbasket and persistently poor rural America. During the summer of 1989, a team of two Public Voice surveyors traveled to 33 persistently poor rural counties throughout the United States. They priced a Thrifty Food

marketbasket in 133 food stores, including 51 supermarkets and 82 small to medium food stores, consisting of 77 different foods.

The study found rural poor communities dependent upon smaller, more expensive stores for their food because few competitively priced supermarkets were located in these areas. It found unstocked shelves, and a dearth of fresh fruits, vegetables, and meats. Most important, the survey found the price of a "Thrifty Food Plan" marketbasket far exceeded food stamp allotments no matter where the rural poor shopped.

Key Findings

1. Food stamp benefit allotments are not adequate to purchase the foods necessary for the minimally adequate diet, the Thrifty Food Plan, for persons living in persistently poor rural America.

The Thrifty Food Plan is the government's formula to define the costs and foods needed to obtain a minimally adequate diet. The cost of the TFP is used to set benefit allotments for the Food Stamp Program and is the baseline used in determining poverty levels.

In 1989, the U.S. Department of Agriculture valued the weekly cost of the Thrifty Food Plan for a household of four at $75. However, the cost of a TFP marketbasket is substantially higher in persistently poor rural America than USDA's defined cost.

In 1989, the average cost for a week's worth of TFP groceries for a household of four in persistently poor rural America was $102 in small/medium stores; a cost 36 percent higher than USDA's 1989 maximum food stamp benefit allotment for that size household. This amounts to a $27 a week shortfall in food stamps needed to actually purchase the TFP groceries in small/medium stores.

In the more competitively priced supermarkets, the average cost for a week's worth of TFP groceries for a household of four was eight percent higher than USDA's cost. In addition, in only one out of five supermarkets (19.6%) could a TFP marketbasket be purchased for the maximum food stamp benefit allotment of $75 or less.

These findings probably underestimate the actual cost because foods selected for the study's marketbasket were among the least expensive foods in USDA's 31 categories. In addition, surveyors always selected the cheapest item regardless of package size or brand name when pricing food items at the stores. Therefore, consumer preference for specific foods or brand name items was ignored.

2. One out of every three food stamp dollars is spent in the smaller food stores in persistently poor rural America, while the other two dollars are spent in supermarkets.

In 1988, the average percent of coupons redeemed in the smaller food stores in persistently poor rural America was 32 percent. The remaining 62 percent of coupons was redeemed in supermarkets.

A larger share of the coupons is redeemed in the smaller stores in persistently poor rural America than in the nation as a whole. In 1988, 32 percent of the food stamps was redeemed in the smaller stores in persistently poor rural America as compared to 20 percent redeemed in the nation as a whole.

3. Rural America has limited access to the competitively priced supermarkets.

There are disproportionately fewer supermarkets in rural America than in urban America. In 1988, of the 29,738 supermarkets in operation less than one-third (30%) were located in rural America, even though the vast majority (77%) of counties are rural. As a result, there are nearly eight times as many supermarkets per county in urban America as in rural America. The average number of supermarkets per county in rural America was 3.8, while in urban America it was 29.2.

Not only are there fewer supermarkets per county, but the average number of square miles per supermarket is nearly 10 times larger in rural America than in urban America. In 1988, rural America had an average of one supermarket every 265 square miles, while urban America had one supermarket every 27 square miles.

Persistently poor rural America has even fewer supermarkets than the non-poor areas in rural America. There are roughly one-third more supermarkets per county in rural non-poor America than in persistently poor rural America. In 1988, the average number of supermarkets in persistently poor rural America was 2.9, compared to 3.9 in rural non-poor America.

4. The availability of fresh fruits, vegetables and meats is extremely limited in the small/medium stores in persistently poor rural America.

During the summer of 1989, 23 percent of the small/medium stores did not stock any fresh vegetables. An additional 35 percent of these stores only carried between one and four fresh vegetables and those most frequently stocked were onions and potatoes.

The availability of fresh fruits is even more limited in small/medium stores. One out of three (33%) stores stocked no fresh fruits. An additional 43 percent only carried between one and four fresh fruits and those most frequently stocked were bananas, apples, oranges and grapefruit.

As with fresh produce, small/medium stores in persistently poor rural America offered a limited selection of fresh meats. Almost one-third (30%) of these stores stocked no fresh meats. An additional one-third only carried between one and four fresh meats.

Key Recommendations

1. Provide Adequate Food Stamp Benefit Allotments to Recipients

▸ Raise food stamp benefit allotments 5 percent above the cost of the Thrifty Food Plan in FY 1991 and an additional 3 percent for the next four years. By FY 1995 benefit allotments will be increased 17 percent above the cost of the TFP.

This study shows that a 17 percent increase in food stamp benefit allotments is necessary if the rural poor are to have the purchasing power to obtain the minimally adequate diet, the Thrifty Food Plan. This figure takes into account the proportion of purchases made in small/medium stores as well as in supermarkets.

In addition, our findings concur with urban studies showing similar cost discrepancies. Findings from one study showed that the cost of the Thrifty Food Plan in 1987 in Los Angeles' supermarkets was 15 percent higher, in medium stores 26 percent higher and in small food stores 38 percent higher than USDA's established cost.

In another study, conducted in three areas in New York State in 1989 showed that compared to the maximum food stamp benefit allotment, the cost of the TFP marketbasket in supermarkets was 4.6 percent higher in a suburban county, 8.9 percent higher in a rural county and 14.1 percent higher in the borough of Brooklyn. Marketbasket costs in small/medium stores were all consistently higher, ranging from 17.5 to 21.9 percent higher than maximum food stamp allotments.

▸ Revise food stamp benefit allotments twice a year rather than once a year.

Each month the cost of purchasing the Thrifty Food Plan is updated using the Consumer Price Index based on data collected by the Bureau of Labor Statistics. Since 1980, food stamp benefit allotments have been revised only once a year. Therefore, in any given year, food stamp benefits lag 3 to 15 months behind the actual cost of the plan.

▸ Index the minimum benefit of $10 provided to one and two person households to reflect inflation.

The current minimum benefit has not been increased since 1977, while the cost of the Thrifty Food Plan has risen 89 percent over this same period.

▸ Re-evaluate the methodology used to determine food stamp benefits.

This study shows that the methodology used to determine the cost of the Thrifty Food Plan and thus food stamp benefit allotments for the rural poor is inappropriate. USDA's cost determination of the TFP is not based on food prices incurred by the rural poor. Rather it is based primarily on food prices in large supermarkets in major urban areas. Moreover, the indexes are based on the average consumer, rather than the low-income consumer.

These indexes therefore are not realistic measures of what the rural poor actually pay for food. As this study showed, the rural poor have limited access to supermarkets and must shop for at least some of their groceries in the smaller more expensive stores. In addition, even if the rural poor shop in supermarkets, their costs are still higher than the food stamp benefit allotments.

▸ Move toward replacing the Thrifty Food Plan with the Low Cost Food Plan as the standard for setting food stamp benefit levels.

The Thrifty Food Plan is only intended to provide for a minimally adequate diet on an emergency basis, not sustain good nutritional status over a long period of time. Both the Society for Nutrition Education and the American Public Health Association passed policy statements in 1980 criticizing the inadequacy of the Thrifty Food Plan.

2. Assist Smaller Food Stores Become More Competitively Priced and Offer a Wider Variety of Fresh Produce and Meats.

▸ Establish a three to five year federal grant demonstration program to support the creation of cooperative wholesale buying with established wholesalers for small/medium food markets in economically depressed rural areas.

A major obstacle to selling foods at comparable prices to area supermarkets is the inability of small/medium stores to purchase foods from wholesalers at the same prices as supermarkets. Approximately three out of four (72%) owners of small/medium food stores reported they were paying more to purchase foods from wholesalers than from area supermarkets. When asked why, the most often heard

response was that they don't buy the volume of food that supermarkets do and thus pay more.

The Hartford Food System in Connecticut recognized this problem and several years ago organized local small/medium food stores into the Hartford Grocers' Association. As members of this association, the smaller stores have access to substantially lower wholesale prices through collective buying agreements. The association also provides collective advertising, mutual aid and support to its member stores. Starting in the summer of 1990, association members will buy many of their fresh food directly from local farmers. This urban solution could be replicated in a rural setting.

▸ **Establish low interest loans for the improvement of small/medium food markets in economically depressed rural America.**

Many of the smaller stores need to modernize their stores and update their equipment. But for many, they either can't procure or can't afford to take out a conventional loan. With little additional cost, the federal government could earmark a certain percentage of the Small Business Administration or the Farmers Home Administration loan programs for this program. This would enable store owners to gain access to low interest loans.

▸ **Establish low interest loans for the purchase of the smaller food stores in economically depressed rural areas.**

Rural America depends heavily on smaller food stores. However many are closing when either the store owner retires or dies. It is extremely difficult to sell a smaller food store. While the store may have made a marginal profit, the debt burden of taking out a conventional loan to purchase the business and the overhead is too high for many potential buyers to make a profit. As a result, food stores are simply closing. This not only means that people have to travel farther to do their shopping, but that local community employment and dollars are leaving that town.

INTRODUCTION

More than nine million people live in poverty in rural America. However, the rural poor are among the most invisible of Americans even though the poverty rate in rural communities is higher than in metropolitan areas. In 1987, the poverty rate in rural America was 16.9 percent, as compared to 12.5 percent in metropolitan areas. Since 1978, poverty has increased by more than 25 percent, bringing the total number in poverty in rural America to 9.1 million.

The rural poor are a group profoundly hampered by poor nutrition and the debilitating health consequences that follow. Since 1984, Public Voice has documented the serious nutritional shortcomings in the diets of the rural poor and identified some of the causes of poor nutrition.

Almost one out of every two persons living in rural communities fail to consume even two-thirds of their daily Recommended Dietary Allowances (RDAs) for vitamin A, vitamin C, calcium and iron. Many of the rural poor exhibit clinical symptoms of advanced nutritional deterioration as a direct result of their inadequate intake of nutrients. The rural poor are one and one-half times more likely to have vitamin A and vitamin C serum blood levels below acceptable standards as compared to the rural non-poor. Rural poor children are two and one-half times more likely to experience growth stunting than are the rural non-poor; an important indicator of chronic undernutrition. In the poorest rural counties, the rates of infant mortality and low birth weight babies are dramatically higher as compared to the nation as a whole.

The Food Stamp Program is the government's primary program to prevent the rural poor from going hungry and becoming malnourished. However, there is growing evidence that benefit allotments are not adequate to actually purchase a minimally adequate diet.

Food stamp benefit allotments are set each year based on the cost of the Thrifty Food Plan (TFP) as defined by the U.S. Department of Agriculture (USDA). USDA sets these costs based primarily on food prices in large supermarkets in major urban areas. Moreover, the indexes are based on the average consumer, rather than the low income consumer.

These food prices may not be realistic measures of what the rural poor actually pay to purchase food. There is growing evidence to suggest that the rural poor have limited access to supermarkets and to a large extent rely on the smaller "mom and pop" stores. Studies have shown that food prices are substantially higher in the smaller independent "mom and pop" stores than in supermarkets. In addition, studies have found that smaller stores generally have poorer quality food and more restricted food choices. Therefore, the quality of the food supply may be extremely limited for many of the rural poor.

If the rural poor have limited access to the competitively priced supermarkets, than food stamp dollars probably are not adequate to purchase a minimally adequate diet. This means that many of the rural poor either have to depend on emergency food relief, such as food pantries and soup kitchens or go hungry.

Public Voice undertook this nationwide study to examine the access to supermarkets in rural America and to determine the actual cost and availability of foods in a TFP marketbasket in persistently poor rural America.

METHODS

The Study's Design

The study was designed to examine nationwide the rural poor's access to an affordable and nutritious food supply. This was measured by determining: (a) the cost and availability of food in the persistently poor regions of rural America; and (b) access to supermarkets in rural America.

Rural and Urban Definitions

In this study, the terms "urban" and "rural" are based on the U.S. Census Bureau's definitions of "metropolitan" and "nonmetropolitan" respectively.

Urban is defined as a Metropolitan Statistical Area (MSA). An MSA is a county or group of counties containing at least one central city with a population of 50,000 or more, or a central city with a population of at least 25,000 if the city's population plus the population of contiguous, thickly populated places equals 50,000 or more.

Rural is defined as all counties that are not designated as a Metropolitan Statistical Area (MSA).

Persistently Poor Rural America is defined as all non-metropolitan counties in the 48 contiguous states that had poverty rates of 25 percent in 1980 and had poverty rates of 35 percent or more in 1970.

COST AND AVAILABILITY OF FOOD IN PERSISTENTLY POOR RURAL AMERICA

This component determined the cost and availability of food in persistently poor rural America. A marketbasket of food based on USDA's Thrifty Food Plan (TFP) was used to determine cost and availability. It was selected for two reasons. First, the cost of the Thrifty Food Plan, as determined by USDA, sets annual benefit levels for the food stamp program, which is designed to ensure that all poor Americans have the purchasing power to obtain a minimally adequate diet. Second, it establishes the types and quantities of foods needed to obtain a minimally adequate diet.

The Sample

A three phase sampling strategy was developed to capture the wide range of differences in the number of supermarkets and small/medium stores among counties in rural poor America. In the first phase, persistently poor counties were selected as the area in rural America to study. Persistently poor rural America represents rural areas with the greatest concentration of long-term poor nationwide.

The second phase grouped persistently poor rural counties into one of 13 categories based on the number of supermarkets and the number of small/medium stores certified to accept food stamps. A systematic random sample within each of the 13 groups was conducted and 33 counties of the 269 persistently poor rural counties were selected.

The third phase assigned supermarkets and small/medium stores certified to accept food stamps as separate groups in each of the selected counties from which a random sample of 60 supermarkets and 94 small/medium stores in each county was then selected. Diagram 1 summarizes the sampling design.

Persistently Poor Rural America

Persistently poor rural America is defined as all non-metropolitan counties in the 48 contiguous states that had poverty rates of 25 percent or more in the 1980 Census and poverty rates of 35 percent in the 1970 Census. Persistently poor rural America represents the 269 counties with the greatest concentration of long-term rural poor nationwide.

In selecting persistently poor rural counties, nonmetropolitan counties with poverty rates of 25 percent or more in the 1980 Census were identified. There were 349 such counties. Three counties were eliminated because of reclassification as metropolitan counties after the 1980 Census. The 346 rural counties with the highest poverty rates in the 1970 Census were then identified. These counties had poverty

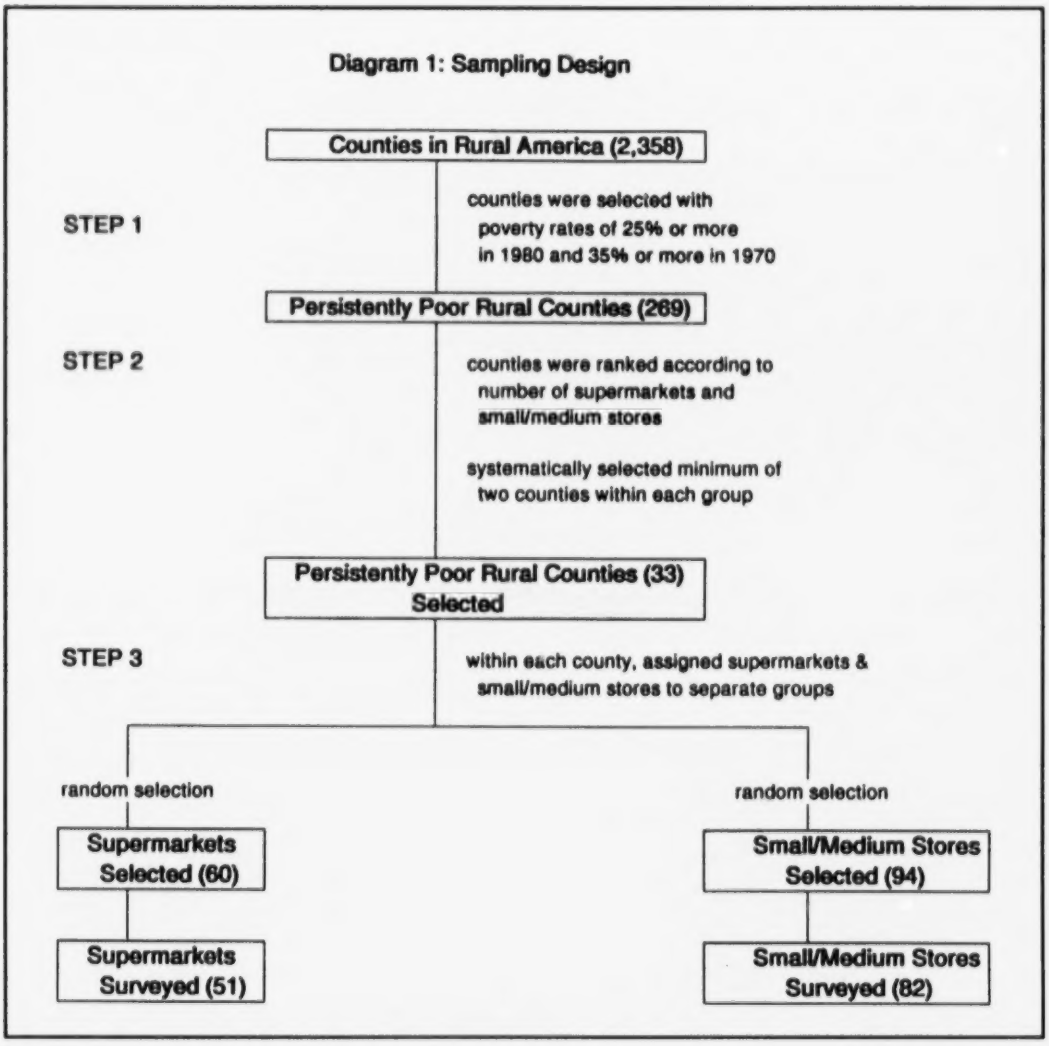


Diagram 1: Sampling Design
Counties in Rural America (2,358)
STEP 1
counties were selected with poverty rates of 25% or more in 1980 and 35% or more in 1970
Persistently Poor Rural Counties (269)
STEP 2
counties were ranked according to number of supermarkets and small/medium stores
systematically selected minimum of two counties within each group
Persistently Poor Rural Counties (33) Selected
STEP 3
within each county, assigned supermarkets & small/medium stores to separate groups
random selection
random selection
Supermarkets Selected (60)
Small/Medium Stores Selected (94)
Supermarkets Surveyed (51)
Small/Medium Stores Surveyed (82)

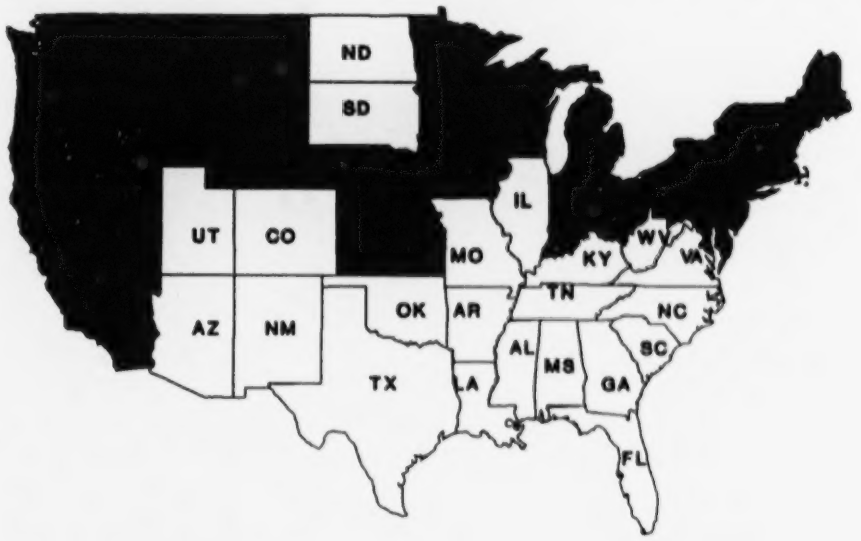
rates of 35 percent or more. All counties included in both cut-off poverty groups were defined as persistently poor rural America.

The 269 persistently poor rural counties are scattered throughout America, with counties in 22 states. In addition, persistently poor rural counties are located in five of the seven USDA regions (see Diagram 2).

Systematic Random Sample of Counties

Persistently poor rural counties were grouped into one of 13 categories based on the number of supermarkets and small/medium food stores certified to accept food stamps, capturing the wide range of differences in the number of supermarkets and

Diagram 2: States with Persistently Poor Rural Counties



small/medium stores among counties. The USDA's Food Stamp Redemption office provided 1988 county-level data on the number of food stores certified to accept food stamps in the 269 persistently poor rural counties. In each category there was a minimum of two counties and a maximum of 39 counties.

Within each group, counties were rank ordered by poverty, from lowest to highest, according to the 1980 Census. This provides an implicit stratification of counties by poverty. Two or three counties were systematically selected from each stratum.

Of the 34 counties originally selected to be included in the study one was eliminated. Todd county, South Dakota had no supermarkets and only one small/medium food store and it was deemed too costly to be included.

Food Stores Certified to Accept Food Stamps

Supermarkets and small/medium food stores certified to accept food stamps in the 33 selected counties comprised the sampling pool for store selection.

Although food stamps are redeemed in 28 USDA classified store types, only those classified by USDA as "supermarkets" and "small/medium" food stores were included. Over 86 percent of the coupons were redeemed nationwide in either supermarkets or small/medium food stores in September 1988, according to USDA, and in no other store type could a full-line of groceries be purchased.

Stratified Random Sample of Food Stores

Within each county, supermarkets and small/medium stores were assigned to separate groups. The sample was stratified this way to determine the cost of food in supermarkets and in small/medium stores and to determine if there were significant cost differences between supermarkets and small/medium stores.

In April 1989 a random sample of supermarkets and small/medium food stores was drawn in each of the 33 counties. The listing of stores certified to accept food stamps in the counties was provided by USDA's Food Stamp Redemption office. In all but four of the selected counties, two supermarkets and two or three small/medium food stores were randomly selected from USDA's list. The remaining four counties had fewer than two certified supermarkets all were selected. A total of 60 supermarkets and 94 small/medium food stores were randomly selected.

Contacting Food Stores

Stores selected for the study were first sent letters informing them of the study and asking for their cooperation. They were then contacted by phone to obtain their permission to be included in the study. The Food Stamp Redemption office at USDA did not have telephone listings for the certified food stores making it necessary to use local directory assistance. If there was no telephone number listed, the local Cooperative Extension office and/or Post Office was contacted. If, after these attempts, no telephone number was obtained or the store was found to be closed, the store was replaced by the next randomly selected food store.

A minimum of three phone calls were made to each store to obtain permission from the manager or owner to include them in the study. If they could not be reached or refused to be in the study, a replacement store was randomly selected.

All stores agreeing to be in the study were sent a postcard thanking them for their participation. Field researchers called every store two to three days in advance of their arrival which served as a reminder that surveyors were coming and confirmed a time to visit the store. It was particularly important to contact the small/medium stores because of the sporadic hours many of these stores were open.

Actual Number of Food Stores Surveyed

Due to the extreme difficulty in contacting the small/medium stores and the limited number of supermarkets in a county, it was not always possible to replace a store eliminated from the survey with another store. The result was that 51 supermarkets and 82 small/medium stores were actually surveyed. At least one supermarket or small/medium store was surveyed in each of the 33 persistently poor counties selected for the study.

The most limiting factor in including small/medium stores in the study was contacting, by telephone, many of the small/medium stores. For almost half (46%) of the small/medium stores selected, a telephone number could not be obtained. This probably biased the sample to the extent it excluded many of the smallest stores which either didn't have a phone or had a private listing under the owner's name.

Other small/medium stores were eliminated from the survey because they refused to participate in the study (10%), they were closed (8%), they were located outside of the selected county (1%) or the store personnel couldn't speak English (1%).

The most limiting factor of including supermarkets in the study was the small number in a county. Few counties had more than two supermarkets; therefore when a supermarket could not be contacted or refused to be in the study there was often no replacement.

Of the supermarkets eliminated, nine percent refused to be in the study, three percent were closed and six percent could not be reached by phone.

Development of Survey Form

A survey form was developed to examine: (a) the cost of a Thrifty Food Plan marketbasket; (b) the availability of fresh foods; and (c) the perceptions of store managers on barriers to affordable food costs and a wide selection of foods.

The Thrifty Food Plan Marketbasket Survey Form

The major component of the survey was designed to determine the cost of a marketbasket of foods based on USDA's Thrifty Food Plan (TFP), which is the least costly of four food plans developed by USDA. It determines the cost, type and quantity of food needed by males and females of different ages to meet minimum dietary standards.

The TFP is not made up of any particular marketbasket of foods. Rather, USDA classifies over 2,400 different foods into one of 31 food groups. Therefore, to select a specific marketbasket of foods for this study the following criteria were used:

1) Any food considered for selection in this study had to first be a food identified in both Table 3 of USDA's 1983 publication, "The Thrifty Food Plan" and in their publication "Making Food Dollars Count" (see Appendix E).

2) From USDA's listings, specific foods were selected if they were: (a) comparatively inexpensive; (b) widely consumed; and (c) widely available.

3) A minimum of one and a maximum of six foods were selected in each of the 31 categories to ensure adequate variety in the marketbasket. The number of foods within each group was in proportion to the relative amount of the food allowed in USDA's TFP. For example, only one food was selected in USDA's "Fish/Shellfish" category because only 0.13 pounds per week was allowed, while six foods were selected in the "High Nutrient Vegetable" category because 5.74 pounds per week were allowed (see Appendix A for foods and quantities included in the survey's TFP marketbasket).

A total of 77 foods in 31 different food groups composed the TFP marketbasket. Quantities for each food group were based on purchasing a TFP marketbasket for USDA's reference household of four. This household consists of a man and woman between the ages of 20-50 and two children 6-8 and 9-11 years of age.

No container sizes or identification of brands were included in the food pricing survey. Surveyors were instructed to always select the cheapest food item, irrespective of size or brand name (see data collection section for more details).

Researchers met with officials at USDA's Human Nutrition Information Services (HNIS) to review the study's protocol and the foods and quantities included in the Thrifty Food Plan marketbasket.

Store Observation Form

To examine the availability of fresh foods in supermarkets and in small/medium stores, an observation form was developed for surveyors to count the number of fresh vegetables, fruits and meats in stock. In addition, surveyors categorized their impressions on how well the store shelves were stocked and described the quality of fresh produce (see the study's observation form in Appendix B).

Store Managers Interview

To describe supermarkets and small/medium stores and to examine possible barriers preventing the smaller stores from being competitively priced with area supermarkets and from offering a wide variety of fresh produce, an interview form was developed. In the interview with either the store manager or owner, surveyors asked questions pertaining to the operation of the store, what their arrangement with

their wholesaler was, where they purchased fresh produce, and if they were doing as well this year as last year and five years ago (see interview form in Appendix C).

Surveyors' Training

Three training sessions were held for surveyors and a written set of guidelines was developed to train them for the food pricing survey (see Appendix D). A nutritionist at Public Voice supervised the survey.

Pilot Test Survey

Three pilot tests were conducted in supermarkets and small/medium stores in Northern Virginia in April and May 1989. Survey forms and procedures were revised based on pilot tests.

Data Collection

A team of two Public Voice surveyors traveled in June and July 1989 to 33 persistently poor rural counties in 12 states throughout the United States. The researchers surveyed a total of 133 food stores certified to accept food stamps. Of these, 51 were supermarkets and 82 were small/medium food stores.

Surveyors contacted each store two to three days in advance of their visit to schedule a time to conduct the survey. Upon arriving at the store, the surveyors made contact with the store manager. The survey never began until contact was made with the manager or person-in-charge.

The interview with the manager generally took place first, but this varied according to the manager's wishes. One surveyor began the interview, while the other priced food. The interview lasted anywhere from 5 to 50 minutes. Once the interview was completed, the interviewer would help complete the food pricing survey. The store observation section was completed last. The entire process took between 30 to 90 minutes with the average being around 50 minutes.

In selecting the food items to price, surveyors always selected the least expensive. Whenever possible, unit pricing was used. Efforts were made to ensure that the unit price on the shelves matched the prices on the goods. Unit pricing was available in some of the supermarkets; it was never available in the small/medium stores. If there was no unit pricing, simple division was used to determine the cheapest food item, irrespective of container size or brand name. The largest container size was not always the cheapest and therefore was not automatically chosen. However, excessively large (institutional) containers were not priced since these would be too large for a household of four to use in a reasonable amount of time without spoilage.

Substitutions were made when none of the designated items in a category were available. If none of the items in a food group was available, acceptable substitutes were found using a USDA listing of foods by food groups included in the TFP (see Appendix E). If no acceptable substitute was found, the food group was left blank. Most substitutes occurred in the small/medium stores.

Data Analysis

Study data were inputted by a commercial data processing company. Dr. Linda Neuhauser of the School of Public Health, University of California at Berkeley with Public Voice analyzed the data using SAS statistical programs. Survey data were analyzed separately for each of the survey forms: food pricing, food availability, and store interview, and then merged to examine selected overall correlations. The level of statistical significance was determined for data correlations.

Marketbasket Pricing Analysis

Marketbasket prices were computed for each of the 133 stores surveyed. For stores with no missing items, the marketbasket was priced by adding the costs for each of the 31 food categories. The cost of each food category was computed by multiplying the food price per pound times the total amount allowed for that category. In categories containing more than one food, food prices per pound were averaged. For example, "High-nutrient vegetables" contained a maximum of 6 vegetables. In stores where all 6 were available, the category price was calculated by taking the average price per pound and multiplying it by 5.74 lbs., the total amount allowed for that category. If less than six vegetables were available, the category price was computed using the average price per pound of the available items (multiplied by 5.74).

In stores where one or more of the 31 categories had no foods available, store marketbasket prices were estimated by imputing prices for the missing categories following methods used in USDA's food pricing study: Food Cost Variations: Implications for the Food Stamp Program. This method estimates prices for "missing item" categories through a multi-step process which compares prices of non-missing items in that store to average prices for all stores surveyed (supermarket or small/medium). A ratio is computed by comparing the store's prices for categories of available foods to the average prices for those same categories for all stores of that type. Then, prices for "missing item" categories are imputed by multiplying the particular store ration times the average price of those categories for all stores of that type surveyed.

For example, if small/medium store A is missing potatoes, the following steps would be taken to impute a price for that category:

- A reference small/medium marketbasket is constructed by averaging the prices for each category for all the stores;

- Store A's prices for the other 30 categories are compared to the averaged prices for those same 30 categories in all the small/medium stores surveyed. This produces a ratio of 0.5 showing that Store A's prices were 50 percent lower than the average prices for small/medium stores surveyed;

- If the average price of potatoes in all small/medium stores was $0.40/lb., then 0.5 times $0.40 equals $0.20 would be the imputed price of potatoes in Store A.

Analysis of Food Availability Data

An analysis of descriptive statistics was completed for each question on the food availability form. In addition, data from selected questions (number of fresh vegetables and fruits, etc.) were correlated with marketbasket prices (food pricing form) and client shopping patterns (store interview form).

Analysis of Store Interview Data

An analysis of descriptive statistics was completed for the responses to each question in this interview. Data from selected questions (client shopping patterns, distance to supermarkets, etc.) were correlated with marketbasket prices and food availability data.

ACCESS TO SUPERMARKETS IN RURAL AMERICA

In addition to examining the actual cost and availability of foods in the Thrifty Food Plan, this study also determined if residents living in rural America, specifically the rural poor, have easy access to the affordable and quality food supply in supermarkets. Food prices in supermarkets tend to be cheaper than other store types, such as smaller "mom & pop" stores, convenience stores or gas & grocery stores. Supermarkets also tend to have a far wider selection of foods, particularly fresh produce, than other store types.

Methods for Analysis of Access to Supermarkets

To examine access to supermarkets in rural America three databases were used. They were: Progressive Grocer's 1989 Marketing Guidebook; USDA's food stamp redemption data; and the U.S. Census Bureau's 1988 County and City Data Book.

Progressive Grocer's 1989 Marketing Guidebook provided the data on the number of supermarkets in each of the 3,069 counties in the United States in 1988. Combining Progressive Grocer's supermarket data with Census Bureau data, the average number of supermarkets per county and the average square miles per supermarket in rural and urban America were determined. It was also used to determine if there were significant differences in the number of supermarkets and the number of square miles per supermarket between rural and urban America and between rural poor and rural non-poor America. With the exception of Norfolk, VA and Suffolk, VA, the independent cities of Virginia, Maryland and Missouri were incorporated into the counties according to Progressive Grocer's usage. This was done to make the U.S. Census' and Progressive Grocer's datasets comparable.

The USDA food stamp redemption data was analyzed to determine the extent to which food stamp dollars are spent in supermarkets in comparison to other smaller food retail stores in persistently poor rural counties. The store types selected were supermarkets, small/medium food stores, convenience stores, commercial grocery/gas, commercial grocery/merchandise and produce stands.

Progressive Grocer's and USDA's use of the term "supermarket" are not comparable. Progressive Grocer defines a supermarket as "any full-line, self-service grocery store with a sales volume of $2 million or more annually." The USDA, on the other hand, has no established definition for supermarket. Rather stores applying for certification to accept food stamps select one of the 28 store types listed on the application form without any guidelines.

RESULTS

The results from this study are divided into three sections. The first two sections detail the cost and availability of food in persistently poor rural America respectively. The third section describes access to supermarkets in rural America.

FOOD COSTS IN PERSISTENTLY POOR RURAL AMERICA

Actual Cost of USDA's Thrifty Food Plan

The actual cost of a marketbasket based on USDA's Thrifty Food Plan (TFP) is substantially higher in stores in persistently poor rural America than what USDA sets as its defined cost. In 1989, the USDA standard cost for a household of four to purchase a week's worth of TFP groceries with food stamps was $75. But in persistently poor rural America the average cost is considerably higher in both small/medium stores and supermarkets.

Cost of TFP Marketbasket in Small/Medium Stores

In June-July 1989, the average cost of a week's worth of TFP groceries for a household of four in small/medium stores in persistently poor rural America was $102; a cost 36 percent higher than USDA's cost. This amounts to a $27 weekly shortfall in food stamps needed to actually purchase the TFP groceries in these stores.

PROFILE OF SMALL/MEDIUM STORES

The small/medium store is an integral part of the rural community. It provides a place for townsfolk to gather and a much needed support for the community's economy and inhabitants, as well as an important source of nutrition in otherwise isolated areas.

The "average" small/medium store had from five to eight aisles and was operated by one to three employees. Most stores were independently owned (90%) and the employees were often family members. The stores primarily stocked non-perishables--boxes or cans. Many had limited shelf space and used every nook and cranny available for their wares. Freezer and refrigerator space was even more limited requiring owners to put dairy products in coolers and the produce on countertops.

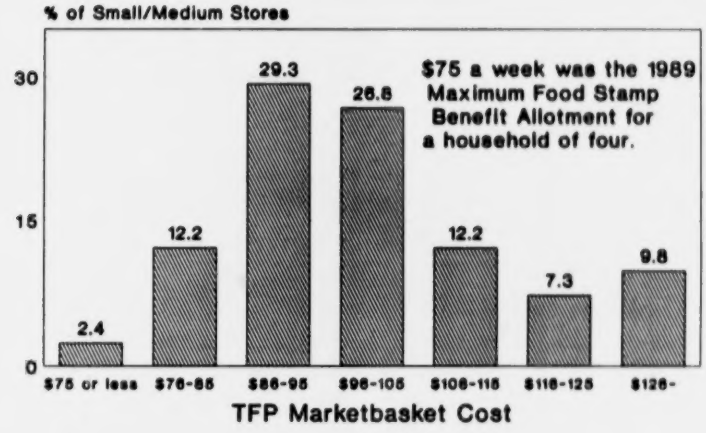
The common thread among the small/medium stores was one of eliminating excess and reducing overhead. Family members were used to run the store; the expensive operating and maintenance costs of freezers were avoided. In the middle of summer, it was not uncommon to find the air conditioning turned off. Additionally, the health of the local economies were integral to the success of the small/medium store. The coal strikes in West Virginia or frequent, heavy rains in Mississippi adversely affected the whole community, not just those directly involved. As one owner commented, food stamps helped smooth out the hard times.

The importance of the small/medium store is their role as members of the community. Four out of five stores (80.5%) gave credit to their customers, a practice almost unheard of in the supermarkets. With credit ranging anywhere from $50 to $500 per customer and customers paying last month's bills with this month's check, the credit cycle tests a store's endurance and owner's patience. The choice is either to force payment and cause hardship and hard feelings, or to continue as always. One owner simply cleared all accounts, took the loss, and avoided the other problems. Regardless of their choice, the decision is a matter of community, as much as it is a question of business.

Further, the size of the small/medium store allows the conscientious owner to assist their customers. For example, a store owner was observed helping an elderly women purchase her food. The women initially tried to buy a box of crackers and soda pop, presumably for her regular meals. The store owner gently encouraged the women, successfully, to buy something more balanced. Later, the owner mentioned that he essentially bought the women's regular groceries since she was no longer capable. On a separate occasion, another owner was seen walking with an elderly women around the store while helping her get the food she needed.

The cost of the marketbasket in persistently poor rural America varied substantially in small/medium stores, ranging from $74 to $214. In only 2 percent of these stores could a weekly TFP marketbasket for four be purchased at USDA's cost of $75 or less (see Figure 1).

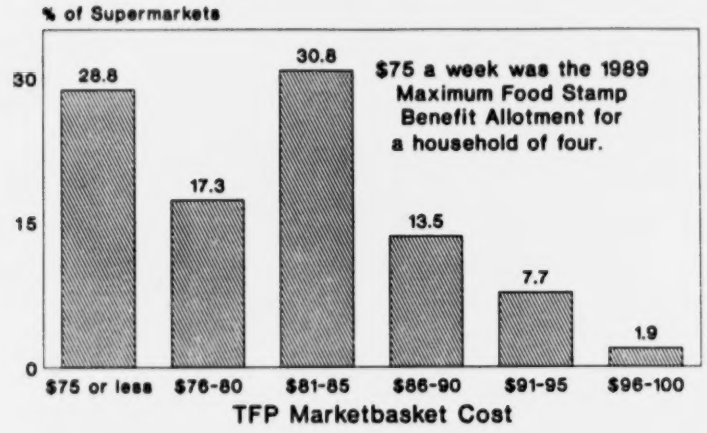
Figure 1: Cost of Thrifty Food Plan Marketbasket in Small/Medium Stores (1989)



Cost of TFP Marketbasket in Supermarkets

Even in the more competitively priced supermarkets, the average weekly cost for the TFP marketbasket for a household of four was $81; a cost eight percent higher than USDA's defined cost of $75.

Figure 2: Cost of Thrifty Food Plan Marketbasket in Supermarkets (1989)



More importantly, in four out of every five (80%) supermarkets in persistently poor rural America, a week's worth of groceries for a household of four could not be purchased for USDA's cost of $75 or less. In supermarkets, the cost varied less than in small/medium stores, but it still ranged from $68 to $97 (see Figure 2).

Comparison of Food Costs in Supermarkets and Small/Medium Stores

The average cost of a TFP marketbasket purchased in small/medium stores is substantially higher (significant at p-value of < 0.001) than in supermarkets in persistently poor rural America. In addition, the range in cost is much greater in the small/medium stores than in supermarkets (see Table 1).

Table 1: Cost of Thrifty Food Plan Marketbasket in Persistently Poor Rural USA (1989)

Store Type	Number of Stores	Average Price	Minimum Value	Maximum Value
Small/Medium	82	$101.56	$73.64	$213.90
Supermarket	51	$80.88	$68.36	$97.17

Cost Differences Within Small/Medium Stores

Within the small/medium stores in persistently poor rural America, the cost of the TFP marketbasket is substantially less ($p < 0.001$) in stores whose owners perceive that more than half of their customers do their major shopping in the store as compared to those whose customers do not do their major shopping in the store. Of the 82 small/medium stores, 35 percent had half or more of their customers doing their major food shopping at the store and 65 percent had less than half of their customers doing their major food shopping at the store. In 1989, the average cost was $91 in stores with major shopping, while the average cost in the other stores was $108. Both prices, however, are substantially higher than USDA's defined cost of $75 for the TFP (see Table 2).

Table 2: Cost of Thrifty Food Plan Marketbasket in Small/Medium Stores, by Type of Shopping (1989)

	Number of Stores	Average Cost	Minimum Value	Maximum Value
Half or more of Customer do Major Shopping	29	$90.54	$73.64	$113.22
Less than Half of Customers do Major Shopping	53	$107.58	$74.11	$213.90

Necessary Increase in Food Stamp Benefit Allotments to Obtain the TFP

Food stamp benefits would have to be increased by an average of 17 percent to cover the actual cost of purchasing the Thrifty Food Plan in persistently poor rural America. This 17 percent increase takes into account the increased costs in both supermarkets and small/medium stores and the proportional food stamp redemption patterns in both types of stores. Therefore, since the TFP cost 8 percent more in supermarkets and 36 percent more in small/medium stores and 68 percent of food stamp coupons are redeemed in supermarkets and 32 percent in small/medium stores, the overall increase is:

$$(0.80 \times 0.68) + (0.36 \times 0.32) = 0.17$$

FRESH FOODS AVAILABLE IN PERSISTENTLY POOR RURAL USA

Number of Fresh Vegetables Available

The selection of fresh vegetables is extremely limited in small/medium stores in persistently poor rural America. During the summer of 1989, one out of every four (23%) stores stocked no fresh vegetables the day of the store visit. In addition, the majority of stores (58%) stocked fewer than five fresh vegetables. Only 12 percent of the stores sold nine or more fresh vegetables (see Figure 3).

The most frequently stocked vegetables in small/medium stores were potatoes and onions. Other vegetables were: lettuce, tomatoes and greens. Most of the missing vegetables were from USDA's "high nutrient" category.

Not only was there a limited number of different vegetables, but there was also a small quantity of each vegetable. In addition, the general appearance was quite poor. Often the vegetables would appear over-ripe or damaged; a condition exacerbated by lack of refrigeration for the vegetables in many stores.

In comparison, supermarkets stock a wider variety of quality, fresh vegetables. Eighty-four percent of the supermarkets in persistently poor rural America sold nine or more fresh vegetables the day of the store visit and no supermarket was without a minimum of one to four (see Figure 4).

Figure 3: Number of Fresh Vegetables Available in Small/Medium Stores (1989)

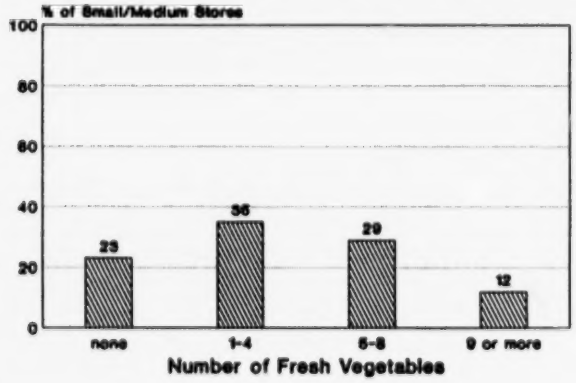
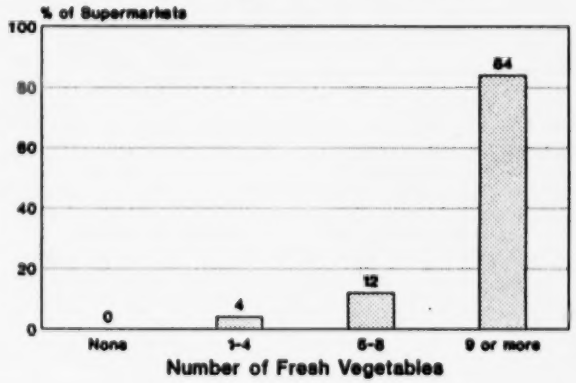


Figure 4: Number of Fresh Vegetables Available in Supermarkets (1989)



Number of Fresh Fruits Available

The availability of fresh fruits is even more limited than fresh vegetables in small/medium stores in persistently poor rural America. During the store visit in the summer of 1989, one out of three (33%) small/medium stores stocked no fresh fruits at all. An additional 43 percent only stocked between one and four fresh fruits and only two percent of the small/medium stores had nine or more fresh fruits in stock (see Figure 5).

Generally, the limited refrigeration and the poor condition of fresh fruits was similar to that of fresh vegetables. The most frequently seen fruits were bananas, apples, oranges and grapefruit. As with vegetables, the quantities of available fruits was generally small.

As with vegetables, supermarkets had a wider selection of fresh fruits than did the small/medium stores in persistently poor rural America. But, supermarkets on the whole had fewer fresh fruits than vegetables. During the store visit, there were 27 percent more supermarkets that stocked nine or more fresh vegetables than fresh fruits. All supermarkets offered between one and four fresh fruits (see Figure 6).

Figure 5: Number of Fresh Fruits Available in Small/Medium Stores (1989)

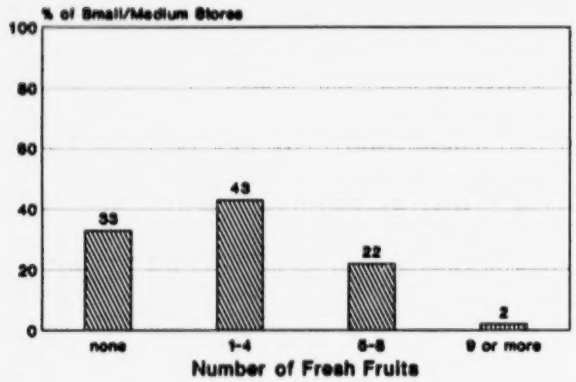
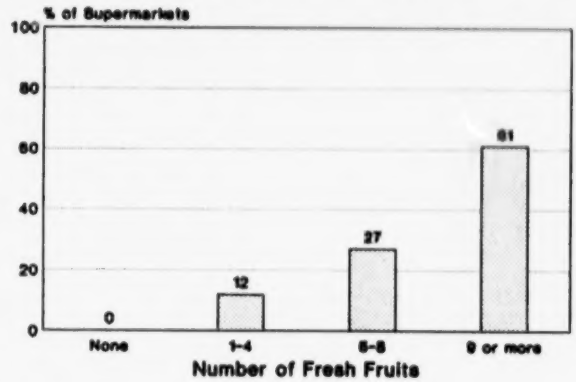


Figure 6: Number of Fresh Fruits Available in Supermarkets (1989)



Number of Fresh Meats Available

Like fresh produce, small/medium stores in persistently poor rural America offered a limited selection of fresh meats. Fresh meats do not include luncheon meats, bacon or hot dogs. Almost one-third (30%) of the small/medium stores stocked no fresh meats. An additional one-third (35%) only stocked between one and four fresh meats. Only seven percent of the small/medium stores sold nine or more fresh meats (see Figure 7).

Meats most frequently seen were ground beef, roasts, organ meats and poultry. The meats, if available, were generally of good quality. Generally, the only available meats in a store were in the freezer.

As with fresh produce, supermarkets had a wider selection of fresh meats than small/medium stores. Almost two-thirds (65%) of the supermarkets sold nine or more fresh meats and almost all of the supermarkets (96%) had a minimum of five fresh meats (see Figure 8).

Figure 7: Number of Fresh Meats Available in Small/Medium Stores (1989)

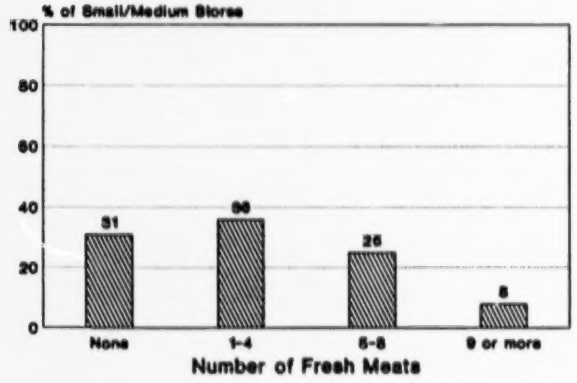
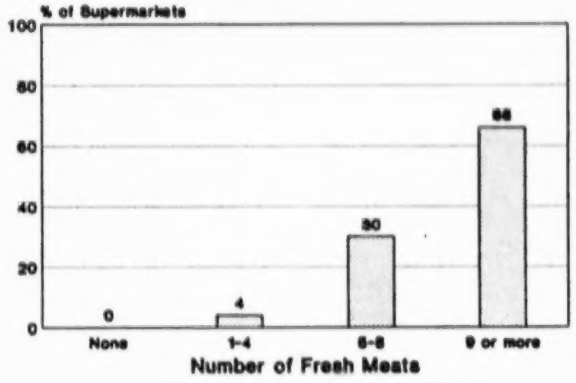


Figure 8: Number of Fresh Meats Available in Supermarkets (1989)



ACCESS TO SUPERMARKETS IN RURAL AMERICA

Number of Supermarkets in Rural America

National Perspective

There are disproportionately fewer supermarkets in rural America than in urban America. In 1988, of the 29,738 supermarkets in operation less than one-third (30.4%) were located in rural America, even though the vast majority (76.9%) of U.S. counties are rural. As a result, there are nearly eight times more supermarkets nationwide per urban county than per rural county. In 1988, the average number of supermarkets per county in rural America was 3.8 while it was 29.2 in urban America (see Table 3).

Table 3: Number of Supermarkets per County in Rural and Urban USA (1988)

Urbanization	Number of Counties	Percent of Counties	Percent of Supermarkets	Number of Supermarkets	Average Number Supermarkets per County
Rural USA	2,358	76.9%	30.4%	9,028	3.8
Urban USA	710	23.1%	69.6%	20,710	29.2

Source: Progressive Grocers' 1989 Marketing Guidebook
U.S. Census' 1988 City and County Data Book

Regional Perspective

Rural areas in the Mountain Plains region have, by far, the fewest supermarkets per county of any U.S. region. In 1988, the average number of supermarkets per rural county in the Mountain Plains region was 2.2, while in the other six U.S. regions the average number of supermarkets per rural county ranged from 3.3 to 8.3 (see Figure 9).

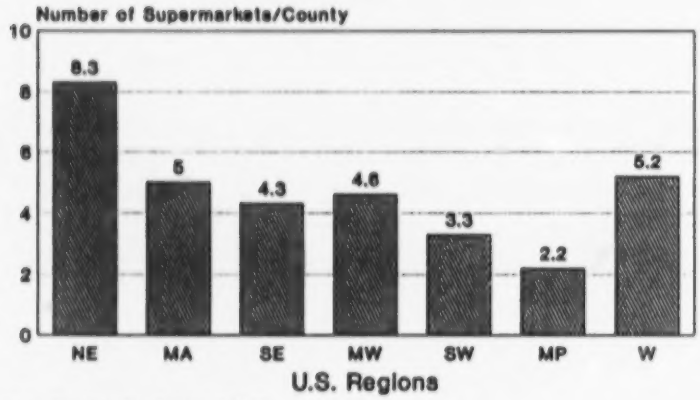
North Dakota, South Dakota and Nebraska had the fewest rural supermarkets of any states with 1.0, 1.2 and 1.6 supermarkets per rural county respectively. In addition, eight other states had fewer than three supermarkets per rural county. They were: Colorado, Georgia, Iowa, Kansas, Montana, Nevada, Texas and Utah. (see Table 4).

Table 4: Average Number of Supermarkets per County in Rural and Urban USA (1988)

	RURAL AREAS			URBAN AREAS		
States	Number of Counties	Number of Supermarkets	Average Number Supermarkets per County	Number of Counties	Number of Supermarkets	Average Number Supermarkets per County
Connecticut	2	41	20.5	6	316	52.7
Maine	13	91	7.0	3	57	19.0
Massachusetts	4	45	11.3	10	485	48.5
New Hampshire	7	62	8.9	3	70	23.3
New York	27	231	8.6	35	1,519	43.4
Rhode Island	1	9	9.0	4	82	20.5
Vermont	12	66	5.5	2	18	9.0
NE Region	66	545	8.3	63	2,547	40.4
Delaware	2	31	15.5	1	38	38.0
Maryland	9	53	5.9	14	441	31.5
New Jersey	0	0	NA	21	676	32.2
Pennsylvannia	34	259	7.6	33	1,127	34.2
Virginia	66	268	3.9	29	525	18.1
West Virginia	45	177	3.9	10	111	11.1
MA Region	156	788	5.0	108	2,918	27.0
Alabama	48	234	4.9	19	387	20.4
Florida	36	187	5.2	31	1,257	40.5
Georgia	121	355	2.9	38	551	14.5
Kentucky	101	336	3.3	19	228	12.0
Mississippi	75	316	4.2	7	102	14.6
North Carolina	74	482	6.5	26	555	21.3
South Carolina	34	236	6.9	12	334	27.8
Tennessee	69	270	3.9	26	411	15.8
SE Region	558	2,418	4.3	178	3,825	21.5
Illinois	76	302	4.0	26	877	33.7
Indiana	62	263	4.2	30	473	15.8
Michigan	61	310	5.1	22	758	34.5
Minnesota	71	217	3.1	16	303	18.9
Ohio	52	337	6.5	36	988	27.4
Wisconsin	53	294	5.5	19	424	22.3
MW Region	375	1,723	4.6	149	3,821	25.6
Arkansas	65	267	4.1	10	118	11.8
Louisanna	45	204	4.5	19	373	19.6
New Mexico	31	122	3.9	2	76	38.0
Oklahoma	63	252	4.0	14	275	19.6
Texas	204	497	2.4	50	1,588	31.8
SW Region	408	1,342	3.3	95	2,430	25.6
Colorado	53	108	2.0	10	251	25.1
Iowa	88	251	2.9	11	150	13.6
Kansas	97	209	2.2	8	186	23.3
Missouri	98	302	3.1	16	383	23.9
Montana	54	129	2.4	2	32	16.0
Nebraska	88	137	1.6	5	83	16.6
North Dakota	49	49	1.0	4	34	8.5
South Dakota	66	78	1.2	1	15	15.0
Utah	25	65	2.6	4	144	36.0
Wyoming	22	82	3.7	1	9	9.0
MP Region	639	1,408	2.2	62	1,287	20.8
Arizona	13	123	9.5	2	294	147.0
California	27	199	7.4	31	2,633	84.9
Idaho	43	140	3.3	1	24	24.0
Nevada	15	29	1.9	2	89	44.5
Oregon	28	166	5.9	8	299	37.4
Washington	28	149	5.3	11	543	49.4
W Region	154	806	5.2	55	3,882	70.6
U.S.	2358	9,028	3.8	710	20,710	29.2

Source: Progressive Grocers' 1989 Marketing Guidebook
U.S. Census' 1988 City and County Data Book

Figure 9: Regional Number of Supermarkets per County in Rural USA (1988)

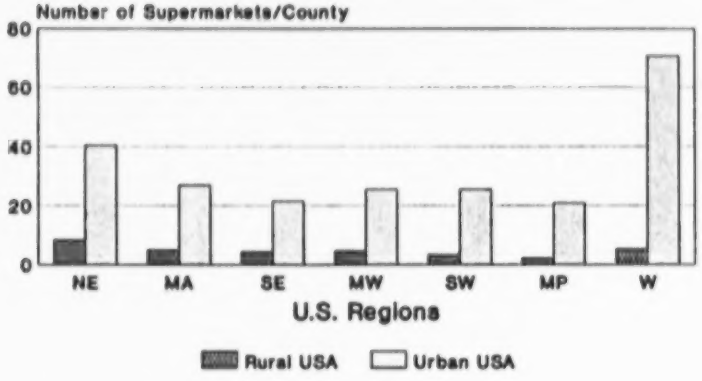


Source: Progressive Grocers' 1989 Marketing Guidebook & U.S. Census' 1988 County and City Data Book

Comparison of Rural and Urban Regions

Rural areas within the seven U.S. regions have substantially fewer supermarkets per county than urban areas. In 1988, the average regional number of supermarkets per county in rural areas ranged from 2.2 in the Mountain Plains to 8.3 in the Northeast. In contrast, the average regional number of supermarkets per county in urban areas ranged from 20.8 in the Mountain Plains to 70.6 in the West (see Figure 10).

Figure 10: Regional Number of Supermarkets per County in Rural and Urban USA (1988)



Source: Progressive Grocers' 1989 Marketing Guidebook & U.S. Census' 1988 County and City Data Book

Huge disparities between the number of supermarkets in urban areas and in rural areas exist within regions of the country; with the greatest gap in the West and Mountain Plains regions. In 1988, there were nearly 15 times as many supermarkets in the urban portion of the West as in the rural portion. In the Mountain Plains region there were nearly 10 times as many supermarkets in urban areas as in rural areas (see Table 4).

Even within states, far fewer supermarkets are in operation in rural areas than in urban areas. In 1988, the number of rural supermarkets per county in states ranged from 1.0 in North Dakota to 20.5 in Connecticut, while in urban areas the range was between 8.5 in North Dakota and 147.0 in Arizona. (see Table 4).

Number of Square Miles per Supermarket

National Perspective

Not only are there fewer supermarkets per county in rural America than in urban America, but the average number of square miles per supermarket is significantly greater. There were nearly 10 times as many supermarkets in urban America that encompassed the same area as in rural America. In 1988, there was, on average, only one supermarket every 265 square miles in rural America, while in urban America the average number of square miles per supermarket was 27 (see Table 5).

Table 5: Number of Square Miles per Supermarket in Rural and Urban USA (1988)

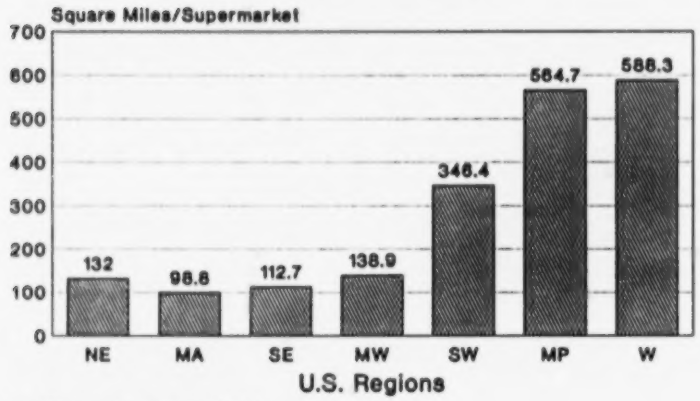
Urbanization	Total Sq. Miles	Total Number of Supermarkets	Average Number of Square Miles per Supermarket
Rural USA	2,395,353	9,028	265
Urban USA	566,368	20,710	27

Source: Progressive Grocers' 1989 Marketing Guidebook
U.S. Census' 1988 City and County Data Book

Regional Perspective

Supermarkets in the rural portions of the Mountain Plains, the Southwest and the West had substantially greater areas per supermarket than in the other rural regions of the country. In 1988, supermarkets in the rural portion of the Mountain Plains region were one every 546 square miles; in the Southwest, one every 346 square miles; in the West, one every 588 square miles. In the other four regions, the average square mile per rural supermarket ranged from 99 to 139 (see Figure 11).

Figure 11: Regional Number
of Square Miles per Supermarket
in Rural USA (1989)



Source: Progressive Grocers' 1989 Marketing Guidebook & U.S. Census' 1988 County and City Data Book

Montana, North Dakota, Nevada, Utah and Wyoming were the five states with the greatest area per rural supermarkets. In 1988, the average square mile per rural supermarket in these four states ranged from 1,083 to 3,299 (see Table 6).

Comparison of Rural and Urban U.S. Regions

Supermarkets in rural areas of the seven U.S. regions are substantially farther apart than in urban areas. In 1988, the average regional number of square miles per supermarket in rural areas ranged from 99 to 588. In contrast, the average regional square miles per supermarkets in urban areas ranged from 15 to 48 (see Figure 12).

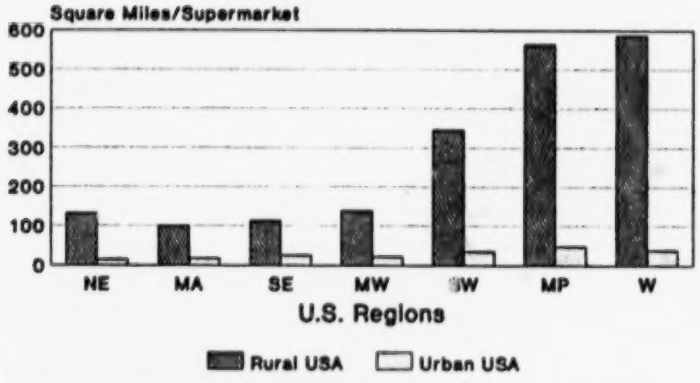
Large disparities in the average number of square miles per supermarket between urban and rural areas also exist within regions. The greatest gaps are in the Southwest, Mountain Plains and West where there are more than 10 times as many supermarkets in a given urban area as in a rural area. In 1988, the average number of square miles per supermarket in rural areas in the West was 588, while in urban areas it was 39; in the Mountain Plains, the average square miles per supermarket in rural areas was 564, compared to 48 square miles in urban area; and in the Southwest, the average square miles per supermarket in rural areas was 346, while in urban areas it was 35 (see Table 6).

Table 6: Average Square Miles per Supermarket in Rural and Urban USA (1988)

State	RURAL AREAS			URBAN AREAS		
	Number of Square Miles	Number of Supermarkets	Average Number Square Miles per Supermarket	Number of Square Miles	Number of Supermarkets	Average Number Square Miles per Supermarket
Connecticut	1,436	41	35.0	3,435	316	10.9
Maine	26,211	91	288.0	4,783	57	83.9
Massachusetts	1,251	45	27.8	6,574	485	13.6
New Hampshire	7,047	62	113.7	1,945	70	27.8
New York	27,258	231	118.0	20,118	1,519	13.2
Rhode Island	107	9	11.9	947	82	11.5
Vermont	8,645	66	131.0	629	18	34.9
NE Region	71,955	545	132.0	38,431	2,547	15.1
Delaware	1,537	31	49.6	396	38	10.4
Maryland	3,673	53	69.3	6,165	441	14.0
New Jersey	0	0	NA	7,467	676	11.0
Pennsylvannia	23,571	259	91.0	21,321	1,127	18.9
Virginia	28,261	268	105.5	11,440	525	21.8
West Virginia	20,803	177	117.5	3,318	111	29.9
MA Region	77,845	788	98.8	50,107	2,918	17.2
Alabama	35,506	234	152.1	15,168	387	39.2
Florida	26,688	187	142.7	27,465	1,257	21.8
Georgia	47,060	356	132.8	10,998	551	20.0
Kentucky	33,827	336	100.7	5,843	228	25.6
Mississippi	42,585	316	134.8	4,648	102	45.6
North Carolina	36,242	482	75.2	12,601	555	22.7
South Carolina	20,709	236	87.8	9,497	334	28.4
Tennessee	29,508	270	109.3	11,846	411	28.3
SE Region	272,215	2,416	112.7	97,866	3,825	25.6
Illinois	40,083	302	132.7	15,568	877	17.8
Indiana	24,245	263	92.2	11,684	473	24.7
Michigan	43,114	310	139.1	13,837	758	18.3
Minnesota	65,210	217	300.5	14,336	303	47.3
Ohio	24,371	337	72.3	16,635	966	16.9
Wisconsin	42,274	294	143.8	12,151	424	28.7
MW Region	239,297	1,723	138.9	84,211	3,821	22.0
Arkansas	44,974	267	168.4	7,100	118	60.2
Louisianna	32,193	204	157.8	12,330	373	33.1
New Mexico	116,348	122	953.7	4,988	76	65.6
Oklahoma	56,583	252	224.5	12,074	275	43.9
Texas	214,711	497	432.0	47,308	1,588	29.8
SW Region	464,807	1,342	346.4	83,800	2,430	34.5
Colorado	87,998	108	814.8	15,597	251	62.1
Iowa	48,976	251	195.1	6,963	150	46.6
Kansas	76,842	209	366.7	5,140	186	27.6
Missouri	59,295	302	196.3	9,649	383	25.2
Montana	139,818	129	1,083.9	5,323	32	166.3
Nebraska	74,589	137	544.4	2,054	83	24.7
North Dakota	82,550	49	1,276.5	6,746	34	198.4
South Dakota	78,144	76	988.7	810	15	54.0
Utah	78,436	65	1,206.7	3,639	144	25.3
Wyoming	91,638	82	1,117.5	5,347	9	594.1
MP Region	795,086	1,408	564.7	61,293	1,287	47.6
Arizona	96,194	123	773.9	18,314	294	62.3
California	70,993	199	356.7	85,301	2,633	32.4
Idaho	81,359	140	581.1	1,052	24	43.8
Nevada	95,697	29	3,299.9	14,198	89	159.5
Oregon	83,171	166	501.0	13,015	299	43.5
Washington	47,734	149	320.4	18,780	543	34.6
W Region	474,148	806	588.3	150,660	3,882	38.8
U.S.	2,395,353	9,028	265.3	566,366	20,710	27.3

Source: Progressive Grocers' 1989 Marketing Guidebook
U.S. Census' 1988 City and County Data Book

Figure 12: Regional Number of Square Miles per Supermarket in Rural and Urban USA (1988)



Source: Progressive Grocers' 1989 Marketing Guidebook & U.S. Census' 1988 County and City Data Book

Even within states, there are substantially fewer supermarkets per area in rural areas as compared to urban areas. In 1988, the average square mile per rural supermarket ranged from 12 in Rhode Island to 3,299 in Nevada. In comparison, in urban areas the average square miles per supermarket ranged from 10 in Delaware to 594 in Wyoming (see Table 6).

Rural supermarkets in over one-third (35%) of the states had areas greater than 300 square miles, while only urban supermarkets in Wyoming had an area more than 300 square miles. In urban areas the vast majority (79%) of states had supermarkets, on average, in areas of 50 square miles or less. On the other hand, only a small portion (8%) of the states had rural supermarkets in areas of 50 square miles or less (see Table 6).

Access to Supermarkets in Persistently Poor Rural America

Persistently poor rural America experienced the greatest shortage of supermarkets in operation. Persistently poor rural America had fewer supermarkets per county than rural non-poor counties or urban areas. In 1988, the average number of supermarkets in persistently poor rural areas nationwide was 2.9, while in non-poor rural areas it was 3.9 supermarkets per county (See Table 7).

The number of square miles per supermarket was also slightly greater in persistently poor rural America than in non-poor rural America. In 1988, the average number of square miles per supermarket in persistently poor rural areas was 284 square miles while in rural non-poor areas it was 263 square miles.

Table 7: Access to Supermarkets in Rural and Urban USA (1988)

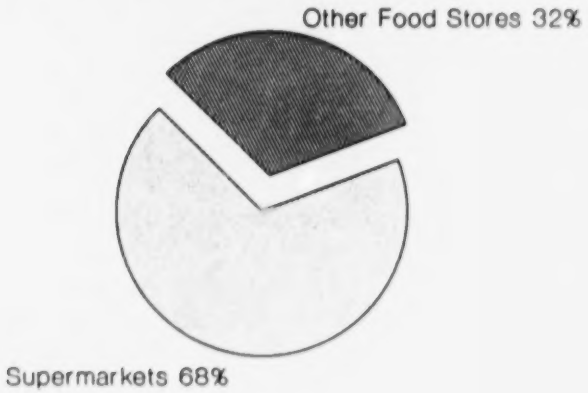
Urbanization	Number of Counties	Number of Supermarkets	Average Number of Supermarkets per County
Rural Poor USA	269	785	2.9
Rural Non-Poor USA	2,089	8,243	3.9
Urban USA	710	20,710	29.2

Source: Progressive Grocers' 1989 Marketing Guidebook
U.S. Census' 1988 City and County Data Book

Food Stamp Redemption Patterns in Persistently Poor Rural America

One out of every three food stamp dollars redeemed in persistently poor rural America is spent in the smaller food stores. The other two dollars are spent in supermarkets. In 1988, the average percent of the coupons redeemed in stores other than supermarkets in persistently poor rural counties was 32 percent. The supermarket coupon redemption rate was 68 percent (see Figure 13).

Figure 13: Percent of Food Stamps Redeemed in Persistently Poor Rural USA, by Store Type (1988)



Source: USDA's FNS, 1988

In comparison to the nation as a whole, a substantially greater share of food stamp coupons are redeemed in the smaller food store types in persistently poor rural America. In 1988, only 20 percent of the food stamps were redeemed in the smaller store types nationally, while 32 percent were redeemed in these stores in persistently poor rural America. In addition to the small/medium stores, the "gas and go" also receives a greater share of the coupons in persistently poor rural America as compared to the nation as a whole (see Tables 8).

Table 8: Percent of Food Stamps Redeemed in USA and Persistently Poor Rural America, by Store Type (1988)

	USA		PERSISTENTLY POOR	
Store Type	Redemption Amount ($) (Sept. 1988)	Percent Total	Redemption Amount ($) (Avg/mo.1988)	Percent Total
Supermarket	$623,092,853	79.9%	$31,341,874	68.2%
Small/medium	$99,195,218	12.7%	$8,205,052	17.9%
Convenience	$32,003,161	4.1%	$1,986,481	4.3%
Produce Stand	$4,905,258	0.6%	$220,466	0.5%
Grocery/Gas	$13,198,797	1.7%	$2,910,807	6.3%
Merchandising	$7,714,687	1.0%	$1,260,802	2.7%
TOTAL	$780,109,974	100.0%	$45,925,482	99.9%

Source: USDA's Food Stamp Redemption Office, 1988

CONCLUSIONS

1. Food stamp benefit allotments are not adequate to purchase the foods necessary for the minimally adequate diet, the Thrifty Food Plan, for households living in persistently poor rural America.

The Thrifty Food Plan (TFP) is the government's formula to define the cost and foods necessary to obtain a minimally adequate diet. The cost of the TFP is used to set benefit allotments for the Food Stamp Program and is the baseline used in determining poverty levels.

In 1989, the U.S. Department of Agriculture (USDA) valued the cost of the Thrifty Food Plan for a household of four at $75. However, in persistently poor rural America the cost of a TFP marketbasket is substantially higher than USDA's defined cost. In 1989, the average cost for a week's worth of TFP groceries for a household of four in persistently poor rural America was $102 in small/medium stores; a cost 36 percent higher than the maximum food stamp benefit allotment for that size household. This amounts to a $27 a week shortfall in food stamp coupons to actually purchase the TFP groceries in small/medium stores.

Even in supermarkets, the average cost was eight percent higher and in only a small minority of supermarkets (20%) could a TFP marketbasket be purchased for the maximum food stamp benefit allotment of $75 or less.

These food cost findings probably underestimate the actual cost to food stamp recipients in persistently poor rural America. The foods in our marketbasket were selected from among the least expensive foods in USDA's 31 categories. In addition, surveyors always selected the cheapest item regardless of package size or brand name when pricing food items at the stores. Therefore, consumer preference for specific foods or brand name items was ignored.

Almost half of the selected small/medium stores did not have published telephone numbers and were disqualified and replaced with another small/medium store. This biased the sample to survey the larger and more prosperous small/medium stores.

It is critical to raise food stamp benefit allotments to the necessary levels as most rural poor households do not have the extra cash to cover the shortfall and many are already nutritionally vulnerable.

As earlier studies conducted by Public Voice have shown, the rural poor exhibit profound nutritional deficiencies and the debilitating health consequences that follow. Nearly one out of every two poor persons living in rural America failed to consume even marginally adequate levels of vitamin A, vitamin C, calcium and iron. But perhaps most shocking of all is that rural poor children are two and one-half times more likely than our nation's non-poor children to experience growth stunting; an important indicator of chronic undernutrition.

When nutritional status is even marginally compromised, it exacts the greatest toll on young victims. Among young children, poor nutrition impairs learning, cognitive development and the ability to concentrate. Further, due to their lower resistance to infections, marginally malnourished children tend to miss school more often, and are generally less motivated learners.

For adults, the effects are similar: lower work productivity, diminished capacity for prolonged physical work and decreased worker motivation. Poor nutrition is also directly linked to increased rates of infant mortality.

2. One out of every three food stamp dollars is redeemed in the smaller food stores in persistently poor rural America, while the other two dollars are redeemed in supermarkets.

In 1988, the average percent of coupons redeemed in smaller stores in persistently poor rural America was 32 percent. The remaining 68 percent was redeemed in supermarkets.

A larger share of the coupons is redeemed in the smaller stores in persistently poor rural America than in the nation as a whole. In 1988, 32 percent of the food stamps were redeemed in the smaller stores in persistently poor rural America as compared to 20 percent redeemed in the nation as a whole.

The government currently does not take into account the proportion of dollars spent in the smaller stores to determine the cost of the Thrifty Food Plan. It is critical that the government begin to do so as many of the rural poor rely heavily on the smaller food stores to purchase at least some of their groceries. That way, the government can more accurately estimate the actual cost of the Thrifty Food Plan for the poor.

3. Rural America has limited access to the competitively priced supermarkets.

Urban America has nearly eight times as many supermarkets per county and nearly 10 times as many supermarkets per area as rural America. In 1988, rural America had an average of 3.8 supermarkets per county and one supermarket every 265 square miles, while urban America had an average of 29 supermarkets per county and one supermarket every 27 square miles. Not only is it a matter of simply traveling farther to get to the nearest supermarket, but the total number of supermarkets to choose from is substantially limited. The opportunity to bargain shop becomes more difficult since the nearest shop may be miles away; a fact that is exacerbated by the lack of good public transportation in rural areas.

Further, persistently poor rural America has even fewer supermarkets and slightly larger areas per supermarket than non-poor rural America. There were roughly one-third more supermarkets per county in rural non-poor America than in persistently poor rural America.

It is, therefore, important to develop creative rural development initiatives that assist the small/medium stores in persistently poor rural America in becoming more competitively priced and offering a wider variety of fresh produce and meats. That way food stamp recipients will have a greater opportunity in obtaining a more nutritious marketbasket.

4. The availability of fresh fruits, vegetables and meat is extremely limited in the small/medium stores in persistently poor rural America.

During the summer of 1989, 23 percent of the small/medium stores did not stock any fresh vegetables. An additional 35 percent of these stores only stocked between one and four fresh vegetables and those most frequently stocked were onions and potatoes.

The availability of fresh fruits is even more limited in small/medium stores. One out of three (33%) stores stocked no fresh fruits. An additional 43 percent only stocked between one and four fresh fruits and those most frequently stocked were bananas, apples, oranges and grapefruit.

Like fresh produce, small/medium stores in persistently poor rural America offered a limited selection of fresh meats. Almost one-third (30%) of these stores stocked no fresh meats. An additional one-third only stocked between one and four meats.

It is critical that the smaller food stores in persistently poor rural America offer a wider variety of fresh produce and meat. As earlier Public Voice studies have shown, the rural poor experience higher rates of deficiencies in vitamin A, vitamin C and iron than the rural non-poor or U.S. non-poor populations; the very nutrients that are highly concentrated in either vegetables, fruits or meet.

The rural poor population consistently eats inadequate amounts of fruits and vegetables rich in vitamin A and vitamin C. Almost 90 percent of the rural poor consume no more than three servings of vegetables or fruits rich in vitamin A in a week, and over 60 percent of them eat no more than three servings of vitamin C rich fruits or vegetables in a week. In addition, the rural poor are one and one-half times more likely to have vitamin A and vitamin C serum blood levels below acceptable standards as compared to the rural non-poor or the U.S. non-poor.

Iron deficiency among the rural poor is also a serious problem and meat is one of the best sources of the readily available heme iron. The rural poor are more likely to have hemoglobin and transferrin saturation levels (two indicators of iron deficiency) below acceptable standards than are either the rural non-poor or the U.S. non-poor. In particular, the rural poor are 125 percent more likely to have low hemoglobin levels than the rural non-poor and 80 percent more likely than the U.S. non-poor.

RECOMMENDATIONS

Recommendations for the Food Stamp Program

1. Provide Adequate Food Stamp Benefit Allotments

▸ Raise food stamp benefit allotments 5 percent above the cost of the Thrifty Food Plan in fiscal year 1991 and an additional 3 percent each year for the next four years. By FY 1995 benefit allotments would be 17 percent above the cost of the TFP.

Our study shows that a 17 percent increase in food stamp benefit allotments is necessary if the rural poor are to have the purchasing power to obtain the minimally adequate diet, the Thrifty Food Plan. This figure takes into account the proportion of purchases made in small/medium stores as well as in supermarkets.

Our findings concur with other studies showing similar cost discrepancies in urban areas. Findings from a study conducted by Dr. Linda Neuhauser of the University of California, Berkeley, showed that the cost of the Thrifty Food Plan in 1987 in Los Angeles' supermarkets was 15 percent higher, in medium stores 26 percent higher and in small food stores 38 percent higher than USDA's established cost.

Another study, conducted in three areas in New York State in 1989 by Doctoral student Liz Crockett, Dr. Kate Clancy and Dr. Jean Bowering of Syracuse University found that compared to the maximum food stamp benefit allotment, the cost of the TFP marketbasket in supermarkets was 4.6 percent higher in a suburban county, 8.9 percent higher in a rural county and 14.1 percent higher in the borough of Brooklyn. Marketbasket costs in small/medium stores were all consistently higher, ranging from 17.5 to 21.9 percent higher than maximum food stamp allotments.

▸ Revise benefit allotments twice a year as they were in the late 1970s rather than once a year.

Each month the cost of purchasing the Thrifty Food Plan is updated based on the Consumer Price Index. However, since 1980, food stamp benefit allotments are revised only once a year. In 1978 and 1979 benefits were revised twice a year. In any year food stamp benefits lag 3 to 15 months behind the actual cost of the plan resulting in an average 5 percent shortfall in food stamp benefit allotments, according to an analysis conducted by the Congressional Budget Office.

▸ Index the $10 minimum benefit provided to one and two person households to reflect inflation.

The current minimum benefit has not been increased since 1977, while the cost of the Thrifty Food Plan has risen 89 percent over this same period.

▸ Re-evaluate the methodology used to determine food stamp benefits.

This study shows that the methodology used to determine the cost of the Thrifty Food Plan and thus food stamp benefit allotments for the rural poor is inappropriate. USDA's cost determination of the TFP is not based on food prices incurred by the rural poor. Rather it is based primarily on food prices in large supermarkets in major urban areas. Moreover, the indexes are based on the average consumer, rather than the low-income consumer.

These indexes therefore are not realistic measures of what the rural poor actually pay for food. As this study showed, the rural poor have limited access to supermarkets and must shop for at least some of their groceries in the smaller more expensive stores.

▸ Move toward replacing the Thrifty Food Plan with the Low Cost Food Plan as the standard for setting food stamp benefit levels.

The Thrifty Food Plan is only intended to provide for a minimally adequate diet on an emergency basis, not sustain good nutritional status over a long period of time. Both the Society for Nutrition Education and the American Public Health Association passed policy statements in 1980 criticizing the inadequacy of the Thrifty Food Plan.

2. Improve Food Stamp Participation in Rural America

▸ Reinstate federal matching funds for mandatory state and local outreach efforts.

Until 1981 Congress mandated and funded outreach activities in the Food Stamp Program. Effective outreach efforts must be carefully designed so that they locate and serve the most needy. Specifically states should be encouraged to establish targeted outreach programs in the areas of greatest need in a state. And the information distributed should emphasize the program's eligibility criteria rather than information about the existence of the program.

▸ Increase the vehicle asset limit of $4,500 to $5,500 and index this limit to reflect inflation.

A dependable vehicle is a life-line for those living in rural communities. The rural poor often depend on their vehicles to haul water and wood to their homes which often lack indoor plumbing or piped-in fuel. The current limit of $4,500 has not been adjusted since 1977, while the Consumer Price Index for automobiles has risen 120 percent since then. The President's Task Force on Food Assistance in January 1984 recommended that this limit be increased to $5,500 immediately.

Any amount by which the market value of a vehicle exceeds this limit is counted as a household assets. If total household assets exceed $2,000 for households other than the elderly, the household becomes ineligible for food stamps.

▸ Exempt those households with either no piped in water or fuel, or establish a higher allowable value limit for one vehicle owned by such households before calculating its value toward the household's assets.

▸ Forgive penalties owed by the states through fiscal 1990 for errors incurred under the error rate sanctioning policy.

While Congress relaxed the penalty system in 1988, states still owe between $200 million and $400 million in outstanding fines. Congress has forgiven states for similar penalties in the AFDC program, but as yet has not forgiven penalties in the Food Stamp Program.

▸ Change the household definition to better address the needs of a growing number of rural poor who live in over-crowded housing situations.

Many of the rural poor live in crowded housing situations. By counting the income and resources of close relatives who are often forced to live together to reduce housing costs, many needy families are seriously penalized.

This would also have a beneficial effect on migrant farmworkers who continue to be among the most poorly served. In fact, despite their extreme poverty fewer than one-quarter of the nation's farmworkers currently receive food stamps.

▸ Require states to issue food stamps by mail to all residents in a state, except where significant problems occur.

3. Other Food Stamp Program Recommendations

▸ Require USDA to encourage farmers in farmers markets to accept food stamps by easing the food stamp certification requirements for farmers.

Currently each farmer must set up a separate bank account and apply to USDA for certification. Many farmers see the difficulty incurred in establishing a separate bank account as not worth the effort because they believe few food stamp users purchase food at farmers markets. The result has been that only a small number of farmers accept food stamps.

▸ Ensure that all small/medium food stores have the Electronic Benefit Transfer Systems in their stores.

Many of the rural poor receiving food stamps must shop in the smaller food stores for at least part of their groceries. On average, in persistently poor rural counties, there is only one supermarket every 284 square miles, while in metropolitan counties there is one supermarket every 27 square miles.

In addition, the electronic benefit delivery system must be provided at no cost to the food stores. Many of the owners of food stores smaller than supermarkets would be unable to purchase this equipment and thus would lose potential revenue from their regular customers who are on food stamps. In many small rural towns there is only one food store and the potential loss of food stamp revenues from the lack of electronic equipment could put these stores out of business.

Recommendations for Rural Development Initiatives

1. Assist Small/Medium Stores be More Competitively Priced and Offer a Wider Variety of Fresh Produce and Meats

▸ Establish a three to five year federal grant demonstration program to support the creation of cooperative wholesale buying, with established wholesaler, for small/medium food markets in economically depressed rural areas.

A major obstacle to selling foods at comparable prices to area supermarkets is small/medium stores inability to purchase foods from wholesalers at the same prices as supermarkets. Approximately three out of four (72%) owners of small/medium

food stores reported they were paying more to purchase foods from wholesalers than area supermarkets. When asked why, the most frequently reported response was that they don't buy the volume of food that supermarkets do and thus pay more.

Recognizing this problem, the Hartford Food System in Connecticut several years ago organized local small/medium food stores into the Hartford Grocers' Association. As a member of this association, the smaller stores have access to substantially lower wholesale prices through collective buying agreements. The association also provides collective advertising, mutual aid and support to its member stores. In addition, starting in the summer of 1990, association members will buy many of their fresh food directly from local farmers.

▸ **Establish low interest loans for the improvement of small/medium food markets in economically depressed rural America.**

Many of the smaller stores need to modernize their stores and update their equipment. But for many, they either can't procure or can't afford to take out a conventional loan. One way the federal government could assist, with little additional cost the federal government, would be to earmark a certain percentage of the Small Business Administration or the Farmers Home Administration loan programs for this program. This would enable store owners to receive low interest loans.

▸ **Establish low interest loans for the purchase of the smaller food stores in economically depressed rural areas.**

Rural America depends heavily on smaller food stores. But many are closing when either the store owner retires or dies. It is extremely difficult to sell a smaller food store. While the store may have made a marginal profit, the debt burden of taking out a conventional loan to purchase the business and the overhead is too high for many a potential buyer to make a profit. As a result, food stores are simply closing. This not only means that people have to travel farther to do their shopping, but that local community employment and dollars are leaving that town.

APPENDIX A

SURVEYED FOODS

1. POTATOES (4.81 lbs)	
a) White Potatoes	fresh, canned
2. HIGH NUTRIENT VEGETABLES (5.74 lbs)	
a) Carrots	fresh, canned, frozen
b) Spinach/Kale	fresh, canned, frozen
c) Tomatoes	fresh, canned, frozen
d) Broccoli	fresh, canned, frozen
e) Green Pepper/Other	fresh, canned, frozen
f) Yams/Sweet Potatoes	fresh, canned, frozen
3. OTHER VEGETABLES (6.76 lbs)	
a) Iceberg Lettuce/Other	fresh
b) Peas	fresh, canned, frozen
c) Corn	fresh, canned, frozen
d) Beets	fresh, canned, frozen
e) Yellow Onions/Other	fresh
f) Green Beans	fresh, canned, frozen
4. VITAMIN C-RICH FRUIT (5.8 lbs)	
a) Oranges	fresh, canned
b) Orange Juice	canned, frozen (conc)
c) Grapefruit	fresh, canned
d) Grapefruit Juice	canned, frozen (conc)
5. OTHER FRUIT (5.6 lbs)	
a) Apples	fresh
b) Applesauce	canned (jar)
c) Apple Juice	canned, frozen (conc)
d) Raisins	dried
e) Banana	fresh
f) Peaches/Pineapples	fresh, canned
6. BACON/LUNCHEON MEAT (1.56 lbs)	
a) Bacon	fresh
b) Hot Dog (beef/chicken)	fresh
c) Bologna/other luncheon	fresh
7. CHEESE (0.61 lbs)	
a) American/other	fresh
b) Cottage Cheese	fresh

8. MILK & YOGURT (11.93 qts)	
a) Milk (whole/skim/low-fat)	fresh
b) Plain Yogurt/other	fresh
9. CREAMS/MIXTURES (1.08 lbs)	
a) Sour Cream	fresh
b) Vanilla Ice Cream/other	frozen
10. EGGS (12.9 eggs)	
a) Eggs	fresh
11. WHOLE GRAIN BREAKFAST CEREAL (.70 lbs)	
a) Branflakes/Shredded Wheat	dry/box
b) Oatmeal/Other	dry/box
12. OTHER BREAKFAST CEREAL (.85 lbs)	
a) Rice Krispies/ Cornflakes/Puffed rice	dry/box
13. WHOLE GRAIN FLOUR/RICE/PASTA (.53 lbs)	
a) Whole Wheat Flour	dry
b) Whole Ground Cornmeal	dry
c) Brown Rice	dry
14. OTHER FLOUR/RICE/PASTA (7.2 lbs)	
a) Enriched Spaghetti/ Macaroni	dry
b) Enriched White Flour	dry
c) Enriched White Rice	dry
15. NUTS/PEANUT BUTTER (.73 lbs)	
a) Peanut Butter	fresh
b) Shelled peanuts/Other	fresh
16. MIXTURES: CONDIMENTS (.27 lbs)	
a) Catsup	jar
b) Pickles/Relish	jar
17. SUGAR & SWEETS (2.87 lbs)	
a) Sugar	dry
b) Grape Jelly/Other	jar
c) Pancake syrup	jar
18. FATS & OILS (2.29 lbs)	
a) Corn Oil/Vegetable Oil	fresh
b) Margarine	fresh
c) Mayonnaise	fresh

19. BEANS/LENTILS (1.28 dry lbs)	
a) Kidney/Pinto/Other	dry, canned
20. MIXTURES/MOSTLY MEAT (.28 lbs)	
a) Chili con Carne/ Beef Stew	canned
21. GRAIN MIXTURES (.78 lbs)	
a) Chicken & Noodle Soup	canned
b) Spaghetti & Tomato sauce/other	canned
22. FISH/SHELLFISH (.13 lbs)	
a) Tuna	canned
23. LOW COST RED MEATS (4.62 lbs)	
a) Ground Beef	fresh
b) Chuck Roast	fresh
c) Pork Roast	fresh
24. HIGH COST RED MEATS (1.06 lbs)	
a) Ham	fresh (canned)
b) Steak(round/flank)	fresh
25. POULTRY (3.25 lbs)	
a) Chicken (whole, cut-up)	fresh
b) Chicken (quarters)	fresh
26. BAKERY-not bread (1.68 lbs)	
a) Sandwich Cookies/Other	box/bag
b) Saltine Crackers/Other	box/bag
27. WHOLE GRAIN BREAD (.78 lbs)	
a) Whole Wheat/Other	fresh
28. OTHER BREAD (4.72 lbs)	
a) Hot Dog/Hamburger Rolls	fresh
b) White Bread	fresh
c) Tortillas (corn/flour)	fresh
29. SOFT DRINKS/PUNCHES/-ADES (3.09 lbs)	
a) High Vit.C punch/Other	canned
b) Lemonade	frozen (conc)
c) Soft Drink	bottle

30. SEASONINGS (.16 lbs)

a) Baking Powder	dry
b) Pepper	dry
c) Salt	dry

31. COFFEE/TEA (.15 lbs)

a) Ground Coffee	dry

If none of the items were available within a food category, alternate items were selected using the listing in Appendix E.

APPENDIX B

STORE OBSERVATIONS

Q1. In the fresh produce area (can be in refrigeration section):

1) how many different vegetables are available?	1. none 2. 1 - 4 3. 5 - 8 4. more than 8
2) how many different fruits are available?	1. none 2. 1 - 4 3. 5 - 8 4. more than 8

Q2. In the refrigerated section:

1) how many different meats are available? (not bacon, sausage or luncheon meats)	1. none 2. 1 - 4 3. 5 - 8 4. more than 8
2) Is fresh milk available?	1. Yes 2. No

Q3. In the freezer section:

1) how many different vegetables are available?	1. none 2. 1 - 4 3. 5 - 8 4. more than 8
2) how many different fruits are available (not juices)?	1. none 2. 1 - 4 3. 5 - 8 4. more than 8

Q4. Are/Is there available:

1) generic name brands	1. Yes 2. No
2) store name food brands	1. Yes 2. No
3) wholesaler name brands	1. Yes 2. No
4) a bulk food section?	1. Yes 2. No
4) food sales displayed/advertised?	1. Yes 2. No
5) unit pricing on shelves?	1. Yes 2. No

Q5. Would you designated the food store a:
1) supermarket
2) small/medium food store
3) convenience store
4) commercial grocery/gas store
5) commercial grocery/merchandise

Q6. Are most food shelves
1) well stocked
2) half empty
3) empty

Q7. What proportion of aisles are shelved with food verses non food items?

Q8. Describe the quality of the fresh fruits and vegetables in the store?

Q9. Other Comments:

APPENDIX C

INTERVIEW WITH STORE MANAGER

Q1. Is this store **independently owned, part of a chain or part of an affiliate** - such as an IGA or a Red and White? (CIRCLE RESPONSE)

Q2. Has this store been operated by its current owner for the last three years?
1. Yes 2. No

Q3. Do you believe that **more than half** of your customers do their major food shopping here?
1. Yes
2. No --- What do **most** of your customers purchase here?
a) snack foods
b) deli items
c) odds & ends
d) other

Q4. Do you stock fresh fruits and vegetables (besides onions) year round?
1. Yes
2. No --- What prevents you from offering them year round?
--- How often do you stock fresh fruits & vegetables?

Q5. Do you purchase at least part of your fresh fruits and vegetables from local farmers?
1. Yes --- What do you get from them?
--- How often do you purchase food from them?
2. No --- Why not?

Q6. What's the name of your primary wholesaler?

Q7. In the last three years, have you changed wholesalers?
1. Yes --- Why?
2. No

Q8. Are there any limitations on what you can get from your wholesaler?
1. Yes --- What are the limitations?
--- What would help you overcome these limitations?
2. No

Q9. Is there any other wholesaler you'd prefer to purchase your food from?
1. Yes --- Why?
2. No --- Why not?

Q10. Does your wholesaler allow you to order smaller quantities of a specific food item than the standard number in a carton?

1. Yes
2. No

Q11. Do you ever split food orders from your wholesaler with other food stores?

1. Yes --- please explain
2. No

Q12. Are you required to guarantee your wholesaler that you will purchase a minimum dollar amount of food before they will agree to be your wholesaler?

1. Yes --- please specify requirement
2. No

Q13. Do you accept Food Stamps? 1. Yes 2. No

Q14. Do you accept WIC coupons? 1. Yes 2. No

Q15. Do you offer customers a line of credit?

1. Yes --- what's the maximum line of credit?
2. No

Q16. Is your business doing as well this year as last year?

1. Yes
2. No

Q17. How about over the last 5 years, Is your business doing:

1. just as well as it has over the last 5 years
2. better this year than the last five years or
3. worse this year than the last five years
   --- if worse, ask them why?

CONTINUE SURVEY IF NOT A SUPERMARKET --- OTHERWISE END: (As answered in above question)

Q18. How close is the nearest supermarket to this store (blocks/miles estimate)

Q19. How many **supermarkets** are in the area that your customers might shop in? (ROUGH ESTIMATE OK)

Q20. How many **small/medium food stores** are in the area that your customers might shop in? (ROUGH ESTIMATE OK)

CONTINUE SURVEY IF SUPERMARKETS IN AREA --- OTHERWISE END:

Q21. Do you believe that you can sell food at comparable prices to area supermarkets?

1. Yes --- What keeps your prices comparable?
2. No --- What prevents you from selling foods at comparable prices?

Q22. Would you prefer to use the wholesaler that area supermarkets use?

1. Yes --- Why aren't you using them?
2. No --- Why don't you want to use them?

Q23. Are you paying more to purchase food from your wholesaler than area supermarkets do to purchase food from their wholesalers?

1. Yes --- Why?
2. No --- Why not?

APPENDIX D

SURVEYORS' INSTRUCTIONS FOR MARKETBASKET

I. **ALWAYS SELECT AND PRICE THE CHEAPEST FOOD ITEM!** Listed below are certain procedures that must be followed to ensure that you select the cheapest food item:

1. **Look for food sales posted** in obvious places such as store windows, bulletin boards or on office door. Write down the sale price of any food item included in the survey. Check to see if sale price is cheapest or if there is another item cheaper. Choose the cheapest item.
2. Always make sure you **look at generic or store name brands** in selecting cheapest food item.
3. If you come to a bulk food section, make sure you **cross reference bulk prices to similar foods** found in other aisles and select the cheapest.
4. If unit pricing is on shelves, **always use the unit price code to select cheapest food item.**
5. **Select the cheapest food item, irrespective of size.** However, except for potatoes, never select items over 5 pounds.
6. **Select the cheapest form (low fat, skim, diet, whole)** of food item.

II. **OTHER INSTRUCTIONS:**

1. Always check off food item when priced.
2. When food item is not available, always write in space NA (not available).
3. Always record price/lb. if possible. This can certainly be done when unit pricing is available.
4. If more than one food item is listed on the survey form, such as yams/sweet potatoes, select the cheapest of these items.
5. If a food item is listed with "/other", only look for other item if the specific food is not available.
6. In fresh produce section, if selected food item is priced by number of food items, such as 6 oranges for $1.00, always weigh the actual number of items to determine the price/lb. In other words, after you've weighed the six oranges and their combined weight is 1.5 pounds, then you'd record on the survey form that oranges cost $1.00 for 1.5 pounds.
7. Before leaving the store make sure all food items are priced on the survey form.

APPENDIX E

USDA's FOOD GROUPS

Potatoes	White Potatoes, dehydrated potatoes, mixtures mostly potato
High-nutrient vegetables	Asparagus, bean sprouts, broccoli, brussels sprouts, cabbage, carrots, cauliflower, green peppers, leafy greens, okra, pumpkin, sauerkraut, summer and winter squash, sweetpotatoes, tomatoes, turnips, tomato and vegetable juices
Other vegetables	All other vegetables including artichokes, beets, celery, corn, cucumbers, eggplant, lettuce, lima beans, mushrooms, onions, parsnips, peas, radishes, rutabagas, snap beans
Mixtures, mostly vegetables; condiments	Catsup, chili sauce, barbecue sauce; tomato; and cucumber pickles and relishes; olives; potato chips, sticks; other mixtures, mostly vegetable
Vitamin-C-rich fruit	Cantaloupe, grapefruit, honeydew melon, lemons, limes, mangoes, oranges, persimmons, papayas, strawberries, tangelos, tangerines; citrus and citrus-blend juices
Other fruit	All other fruits including apples, apricots, bananas, berries, cherries, dried fruit, grapes, nectarines, peaches, pears, pineapple, plums, watermelon
Whole grain/high-fiber cereals	Oatmeal, bran cereal, wheat germ, shredded breakfast wheat, granola type, puffed oats, other breakfast cereals made from whole- or high-fiber grains
Other breakfast cereals	Farina, ready-to-eat cereal other than those made from whole or high-fiber grains
Whole grain/high-fiber flour, meal, rice,pasta	Whole wheat, buckwheat, soy, barley, rye, millet, peanut, carob, triticale flours and meal; mixes made from whole-grain/high-fiber flours; whole-ground cornmeal; whole-wheat pasta; popcorn; brown rice; leavenings

Other flour, meal, pasta	White enriched flour, mixes made from white, enriched flour, leavenings, degermed cornmeal, white enriched rice, grits, enriched pasta
Whole grain/high-fiber breads	Whole wheat, pumpernickel, bran, rye, oatmeal, triticale breads, rolls, muffins, pancakes
Other bread	White enriched bread, rolls, muffins, bagels, biscuits, pancakes, waffles, cornbread, tortillas
Bakery products, not bread	Enriched and unenriched cakes, pies, tarts, cobblers, crackers, cookies pastries, doughnuts, pretzels, corn and wheat snacks
Grain mixtures	Soups, mostly grain; pizza; macaroni salad; egg rolls; Spanish rice; macaroni and cheese; spaghetti with tomato sauce; other pasta mixtures and plate meals
Milk, yogurt	Whole milk, lowfat milk, skim milk, buttermilk, nonfat dry milk, imitation milk and formulas, evaporated milk, yogurt, chocolate milk, cocoa with nonfat dry milk
Cheese	Cheddar, Swiss, cottage, other cheeses, imitation cheese, cheese dips, cheese fondue
Cream, mixtures mostly milk	Cream, half and half, sour cream, eggnog, nondairy creamers, puddings, ice cream, ice milk, milkshakes, other frozen desserts, sweetened liquid meal supplements, milk-based soups
Lower-cost red meats, variety meats	Ground beef and pork, beef chuck roast and steak; fresh and cured pork shoulder and Boston butt; beef and lamb stew meat; canned corned beef, roast beef; chipped beef; organ meats such as liver, heart, kidney
Higher-cost red meats, variety meats	Most beef and veal steaks and roasts; cured ham, boiled ham, spareribs, pork loin roast, pork chops; lamb chops, steaks, roasts; variety meats such as brains, tongue, chitterlings
Poultry	Raw and processed chicken, turkey, and other poultry
Fish, shellfish	Raw and processed cod, perch, haddock, sole, and other fish; breaded fish portions and sticks; canned tuna, sardines, and other fish; raw and processed crab, lobster, clams, shrimp, and other shellfish

Bacon, sausage, luncheon meats	Bacon, salt pork, sausage; frankfurters, bologna, salami, liverwurst, other luncheon meats; fatback and other fatty meats; bacon and sausage substitutes
Egg	Egg, egg substitutes
Dry beans, pea, lentils	Dry beans of all kinds; dry peas; lentils; soybeans and soya products
Mixtures, mostly meat poultry, fish, egg	Soups and mixtures, mostly meat, poultry, fish, egg, or legume (plate dinners, entree such as hamburgers, corned beef hash, chili con carne, chicken and tuna salad, pot pies, fish cakes, egg foo yung, beans and franks, etc.)
Nuts, peanut butter	Peanuts, tree nuts, peanut butter and other nut butters, seeds
Fats, oils	Butter, margarine, hydrogenated vegetable fat, lard, cooking oil, salad dressings
Sugar, sweets	Sugar, granulated, powdered, brown, maple; molasses; syrup; honey; jams; jellies; preserves; powdered dessert mixes and prepared desserts; candy; fruit ices; chocolate syrup and topping; sugar substitutes
Seasonings	Salt, seasonings, vinegar, extracts, spices, plain cocoa, baking chocolate
Soft drinks, punches	Soft drinks, regular and diet; fruit ades, punches, drinks, nectars
Coffee,tea	Coffee, tea